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RAILWAY AGE

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WEEK AT A GLANCE

WHAT THE TRAFFIC CAN BE: Potential railroad passenger traffic between given points is subject to mathematical calculation, provided the necessary data are available on which to base such computations, and subject to the effect of major changes in service or in the relative economic status of the communities concerned. This basic argument is developed in an article in this issue (page 44) in which the principle it espouses is applied to actual experience on one important passenger carrier. A by-product of this analysis is a rather convincing demonstration that low fares are the most effective means of securing more customers for the railroads.

A POINTED HINT: The Interstate Commerce Commission's annual report to Congress is reviewed in one of this week's feature articles. Among its other recommendations this agency emphasizes its view that the railroads ought to see what economies can be realized by vigorous efforts toward unification of terminal facilities.

MAN-HOUR MINIMIZERS: One railroad has found that for each additional platform truck it installs at a busy freight-handling point it can dispense with one man. This sort of information made the recent Cleveland materials-handling exposition profitable to the railroads and the producers of equipment for such use. A report of the proceedings appears in this issue.

AIR-MAIL ESSENTIALS: Some members of Congress are searching for ways to make the postal service pay its way, and they have just reported to the House how the air-mail subsidy racket fares under determined scrutiny. The air lines have been indulging in an old-fashioned rate war, it finds, but with a modern touch. Instead of soaking their own treasuries for the losses incident to this expensive form of corporate homicide, the air carriers, the committee explains, have been passing the bill along to the taxpayers. The committee's findings are reported in our news columns this week.)

AS PROVIDED BY LAW: Efforts of the Mediation Board to settle the working rules differences between the railroads and the three obstreperous op unions have been fruitless; the brothers have refused to go along with the managements in agreeing to arbitration; and a strike has been called for February 1—subject, of course, to delay with the appointment of a Presidential "emergency board." The situation is summed up in one of our news articles.

CHEAP MAINTENANCE IS EXPENSIVE: If maintenance officers had nothing to consider but their own departmental budgets they might justify low-quality yard upkeep and the unrestricted use in yards of second-hand materials. But there are other cost factors to be weighed, W. T. Rice of the R. F. & P. pointed out recently in a paper which forms the basis of an illustrated article in this issue. Poorly maintained yards result in derailments, in rough handling, in claims for damage arising from delays, in wasted train- and yard- and engine-service man-hours, in customer ill-will, and in personal-injury settlements, all of which eat away the railroad's net profits and all of which can be substantially reduced by providing adequate yard facilities and keeping them in tip-top shape.

GLOSS INSTEAD OF GOLD: The "planners" in high political places are proficient red-herring producers, but the current price inflation is not going to be cured by half-measures or by efforts to divert the attention of voters and taxpayers and consumers from the ultimate causes of that inflation. Governments turn to the alluring path to inflation when they cut a national currency loose from a hard-money (i.e., gold) foundation and start the printing presses rolling. The outcome, unless an aroused public calls a halt to the process, is more and more "management" and less and less "security" for the individual. Our leading editorial quotes the suggestions by a group of economists of ways to bring inflation to a halt. It is a safe prediction that the extent to which such measures are made effective will shape the future trend of prices and the future worth of the dollar.

COAL VS. OIL: A discussion, from a coal producer's standpoint, of the competitive positions and prospects of coal and oil as locomotive fuels is presented this week on page 40. The trend away from the steam locomotive is, according to this author, a result of a "chronic weakness" of that type of power, that is, its availability. The coal industry and the railroads can work together, he suggests, to make more suitable locomotive coal consistently available to the railroads, and he has no doubt that with better fuel the modern steam locomotive can produce more power more of the time more economically than it has in the past.

SAVING ON A SHORT RUN: Although its present operating conditions make it impracticable for the Pittsburgh & West Virginia to get the maximum use out of the two 2,000-hp. Fairbanks-Morse Diesel-electric units it recently acquired, it already has found that they are producing in short-run service (on a 56-mile segment of the line) operating savings equivalent to a 16.3 per cent annual return on the investment. One of our illustrated articles explains how this is being done.

WHERE THE RATE RISE GOES: According to the latest "Monthly Comment" of the Interstate Commerce Commission's statistics bureau, the additional $1,233 million in annual revenues the Ex Parte 166 "interim" rate increase would produce, if effective throughout 1948, would be distributed as follows: $458 million to Eastern-district roads, $61 million to the Pocahontas lines, $179 million to the South, and $535 million to the western roads. A review of the "Comment" appears on page 32.

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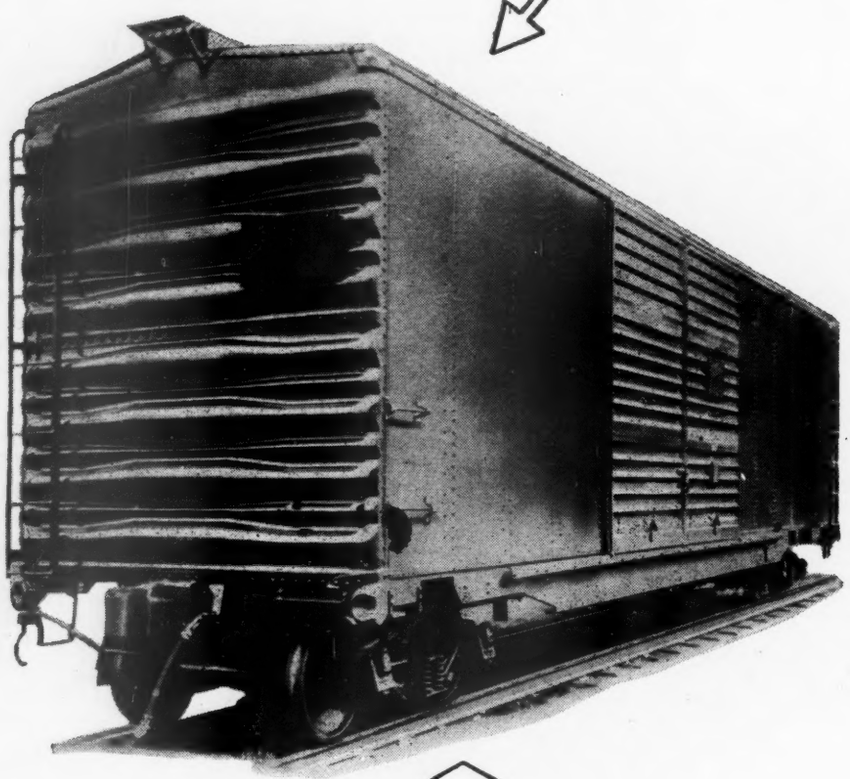

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HOW TO HALT INFLATION

It is impossible to predict with assurance what is going to happen to the railroads—or to the country—without, first, knowing something about the status of the nation's currency and without taking into account what is likely to be done about it. The current price inflation, the source of so much conflict and anxiety, stems directly from the substitution by the New Deal of printing-press money for real money (redeemable on demand in gold); and the elaboration of this reckless jugglery by the Truman administration.

There are two things that farsighted people can do about inflation, viz., (1) reach an informed opinion as to how far it is likely to go and, as far as possible, take appropriate steps to "hedge": and (2), as responsible citizens, exert what political power they have to force the authorities to cease stealing the value from the people's money.

An Automatic Brake

It is not easy to exaggerate how much of the world's present misery can be laid to the loss by the people of monetary gold. When the people had gold, or could exchange their paper money for it on demand, there was a limit to the opportunity of government to extend its power at the expense of that of the people. If government printed too much money in the effort to expand its domain, its greenbacks and shinplasters depreciated in value in comparison to gold; and an automatic brake was thus applied on the extension of government influence and power. Governmental budgets could not long go unbalanced, and government could borrow money only so long as it could retain the confidence of lenders that interest and principal would be paid in gold.

The present political hullabaloo about "high prices," "excess profits," and "speculation" as the causes of inflation is an ignorant or dishonest effort to make the *symptoms* of inflation the culprit for attack which ought to be aimed at the *cause,* viz., irredeemable printing-press money.

Intelligent policy-making by the railroads—on such matters as the issuance or redemption of securities, inventory control, rates, and wages—requires knowledge about what has happened, is happening, or is likely to happen to the national currency. While a full understanding of the subject is a lifetime occupation, a grasp of its essence requires no unusual insight or extraordinary effort. Several able educational organizations are interpreting monetary developments in language comprehensible to anyone not fearful of a moderate degree of intellectual effort.

Of such organizations, the one with longest experience in this patriotic educational endeavor is the "Economists' National Committee on Monetary Policy," 1 Madison avenue, New York 10. The executive vice-president of this

organization is Professor Walter E. Spahr of New York University—who is also a director of the New York Air Brake Company and its economic adviser. The committee is not a "pressure group." It operates by the issuance of information bulletins which keep its supporters up-to-date on what is going on. When, as happens infrequently, it does address a memorandum to Congress, the economists append their names as individuals, and mention portions of the memorandum with which they may disagree. In short, the committee does not try to "high-pressure" Congress, but merely seeks to educate it. It offers no rewards for obedience, nor threatens any punishment if its advice is disregarded.

What the Economists Propose

Such a recent memorandum, entitled "How to Combat Inflation," containing 18 recommendations, was recently submitted to Congress by 53 members of this committee. Only 21 of the 53, however, subscribed to all of the recommendations. These 18 recommendations (with figures in parentheses after each, indicating the number of the 53 signers who have reservations as to that particular item) give about as convenient a summary as could be desired of what the people most competent to judge between sound and unsound monetary policy believe must be done to halt inflation. This list of recommendations follows:

1. A radical reduction in government expenditures; in particular, abandonment of all public work projects except those of an emergency nature. (0)
2. A reduction in taxes. (20)
3. A reduction in the federal debt. (1)
4. A return to a gold-coin monetary standard, and a revision of our monetary laws, in order to reverse the pronounced trend in this country toward a government-ally-managed economy. (10)
5. An increase in production, productive effort, and efficiency of all productive agents. (1)
6. Abandonment of make-work, featherbedding, and other devices for collecting pay for work not done. (2)
7. The maintenance of relatively low inventories and the avoidance of hoarding by business enterprises. (3)
8. The retention by business enterprises of a large percentage of earnings for improvement and expansion of their businesses, and a revision of our tax laws to permit such retention without penalty. (5)
9. The cautious use of credit, and an increase, where possible, of margins of safety against extensions of credit. (1)
10. That sellers make special efforts to maintain the lowest possible prices as a means of forestalling a possible large price decline and severe liquidation. (7)
11. Reduction in tariffs and other trade restrictions. (3)
12. A recognition on the part of our federal government that it cannot buy already relatively scarce supplies without contributing to high or higher prices. (11)
13. Abandonment of federal subsidies except where matters of national protection are involved, and also repeal of price-parity and price-maintenance laws. (1)
14. That the government not confuse symptoms with causes and that it not attempt to control symptoms since such "controls" tend to conceal causes, distort the economic picture, and perpetuate, accentuate, and foster new economic maladjustments. (4)
15. That people not buy what they do not need and that they not borrow to buy things they can do without. (4)
16. That the apparent tendency to loan too freely and too much to foreign countries be sharply curbed. (8)
17. Allow interest rates to find their natural levels. (8)
18. That the Federal System give greater attention to the type of administration of our monetary and credit structure that should foster more harmonious relationships in the various segments of our economy. (8)

A LOOK AT THE FIGURES

Outstanding performances in railroad operation have a way of becoming buried in a maze of statistics and it is worth while, occasionally, to explore the every-day figures in order to find out just what is going on. A study of the statistics of motive power and freight-train performance for the 12 months ended with October, 1947, reveals some rather remarkable changes in railroad operation accompanying the increasing use of Diesel-electric power.

With the increase, as of October, 1947, to a total of 974 Diesel-electric locomotive units assigned to road freight service, the total number of locomotives assigned to that service dropped to what is believed to be an all-time low of slightly over 21,300 units. In that month, when the freight traffic required 54.8 million train-miles and 62.6 million locomotive-miles, the gross ton-miles approached a total of 135.7 billion, which was only 7.4 per cent under the all-time high, war years included. This October peak traffic was handled with 17,538 locomotives, which represented 82.0 per cent of the freight-locomotive inventory. This high rate of use shows that full advantage is being taken of the lessons of the war years.

From January to October, 1947, the number of steam locomotives assigned to freight service dropped from 20,832 to 20,081 and the number of Diesel-electric units increased from 711 to 974. Nevertheless, the number of locomotive-miles per train-mile remains at 1.14, as it has for four consecutive years, indicating that the smaller number of more powerful units is reducing the necessity for helper mileage, even with increasing train loads and speeds. Diesel-electrics now handle better than 10 per cent of the locomotive mileage in freight service and 12.9 per cent of the gross ton-miles.

Probably the most interesting of all the indices of the performance of Diesel-electrics as compared with steam power is that of gross ton-miles per train-hour. In October, 1947, this figure for freight trains handled by steam locomotives reached a high of 3,705 while, in the same month, the figure for trains handled by Diesels was 6,411. Regardless of other factors and the relative in fuel cost this ability to move a lot of freight in a hurry is what makes railroad operation profitable.

POOR YARD MAINTENANCE IS FALSE ECONOMY

The railways have made outstanding advances in freight service during the last two decades, but they can never hope to render the most economical and expeditious service of which they are capable until they further speed up their yard operations. And they can never hope to accomplish this to the greatest extent until those in authority stop treating yards like a "Cinderella" in the matter of standards of construction and maintenance. These, in substance, are the conclusions to be drawn from recent remarks of a superintendent in charge of one of the larger yards of the country (presented in this issue) who, as a former maintenance-of-way officer, is in a particularly favorable position to appraise every weakness in yard construction and maintenance.

Among the major physical weaknesses most often found in yards are poor rail conditions, inadequately ballasted tracks, sharp turnouts with excessively worn switch materials, and poor drainage. Constructively, this speaker, W. T. Rice, superintendent of the Richmond, Fredericksburg & Potomac, points out that well-tamped stone ballast is economical on busy humps and to support the switches at the hump ends of receiving and classification yards; that heavy rail in heavy traffic areas, such as over humps and through important switches, will save track labor and result in less interference with traffic; that the installation in heavily used yard tracks of badly worn frog and switch material from main lines is often false economy; and that sharp turnouts are expensive to maintain and difficult to operate over. He also emphasizes the desirability of good drainage, and calls for adequate track forces, the best in track-force supervision, and maximum cooperation between the track forces and the operating department so that maximum productive work can be done on the tracks at the lowest cost and with minimum interference with traffic.

There is evidence of appreciation of all of these factors in most of the more recently built yards of the country, but every track maintenance officer knows that there are many yards, including important ones, that are being maintained in almost complete disregard of these principles. The reasoning behind such inadequate maintenance ostensibly is economy—in materials and labor—a laudable aim. But such reasoning is woefully weak if it does not take into account the resulting hidden costs involved in yard tie-ups, delayed deliveries, damaged equipment and lading, added switch and train crew service, inconvenience and possible injuries to employees, and lost patron good will. Whether evident on the surface or not, poor maintenance in important yards is costly maintenance, which is what Mr. Rice has in mind when he says, "We must consider the overall picture, and remember that we can't afford *not* to have a high standard of maintenance in our yards where traffic demands such maintenance."

NEW TONE IN LABOR RELATIONS

There are a number of gratifying elements in the recent agreements which concluded negotiations of the working rules dispute between the railroads and employees represented by the Order of Railway Conductors and the Brotherhood of Railroad Trainmen. The settlement not only ended differences, on a national basis, upon many issues long in controversy—without federal intervention or threat of work stoppage—but contains a formal statement of recognition by each party of the other's "fundamental rights." The way is now open for local negotiation of variations in working rules in cases where improved train service might result.

When the operating brotherhoods presented their demands for changes in 44 working rules, the carriers countered with 29 proposals of their own. The treatment accorded two of the latter is particularly noteworthy. One provided that there be recognized in the working agreements the right of the carriers to establish "interdivisional" and "interseniority" districts. In a second the carriers asked that the working schedules provide for the elimination of all rules or practices which require the assignment of cabooses to particular crews.

In the final agreement, of last December 12, these two carrier proposals are disposed of in a manner indicative of the constructive attitude of both parties. The settlement asserts that the two unions are "desirous of cooperating where train service can be improved and trains expedited by the establishment of inter-divisional and interseniority freight and passenger runs, and the pooling of cabooses." It goes on to concede that, where a railroad is not permitted under existing rules to establish these practices and desires to do so, appropriate committees of the unions stand ready to negotiate for their establishment.

Both sides are the winners in such a settlement as this. Measures which injure no one and facilitate improved service to the public will ultimately benefit everybody on the railroads. The action of the O. R. C. and B. of R. T. stands out in commendable contrast to the position of the two enginemen's organizations and the Switchmen's Union of North America, which have refused to assent to similar disposition of the same problems.

ROAD DIESEL IS FOUN

The first two Fairbanks-Morse Diesels of the 2,000-hp. "heavy-duty" type to be placed in regular service have resulted in monthly savings of $4,418 in transportation expenditures alone on the Pittsburgh & West Virginia. This cost reduction is demonstrated by a study of results of operation for a half-month period during which the units were in assigned road freight service. The savings indicated include only transportation items since maintenance charges are an indeterminable factor at this early stage of ownership.

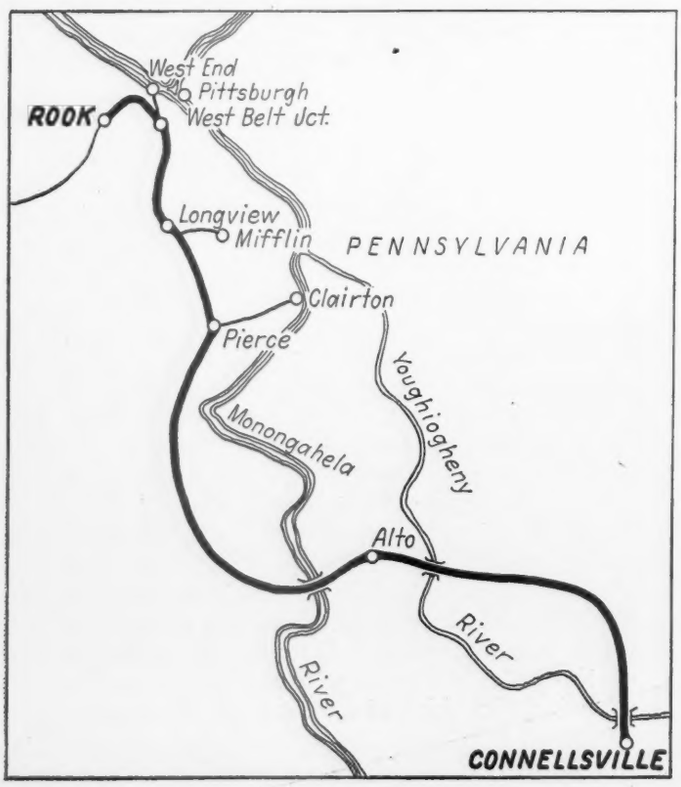
The two units which indicate this ability to reduce operating costs—equivalent to 16.3 per cent annually on the investment—were delivered to the P. & W. V. by Fairbanks, Morse & Co. in mid-October, 1947, and, up to the present, have been operated exclusively as a 4,000-hp. multiple-unit locomotive, coupled cab-to-cab, with a flexible gangway between units. Thus far, the units have been confined to road service, although they may be separated in about 10 min. and operated as two separate 2,000-hp. road, heavy-duty switcher or transfer engines.

Each unit is 51 ft. in length, inside knuckles, and weighs 250,000 lb. ready for service. The entire weight of the locomotive is carried on its two four-wheel power trucks. The distance between truck centers is 27 ft., and driving wheels are 42 in. in diameter. The Diesel engine is of the opposed-piston type.

Table I—Comparative Tonnage Ratings, Connellsville Division

	2-6-6-4 Type Steam Locomotives	4,000-hp. 2-Unit Diesel Locomotive
Eastward		
West Belt Jct. to Longview	2,715	3,200
Pierce to Alto	3,265	4,000
Alto to Connellsville	4,920	6,000
Westward		
Connellsville to Pierce	3,265	4,000
West Belt Jct. to Rook	2,535	3,200

The Connellsville division of the Pittsburgh & West Virginia, comprising the eastern half of the railroad, extends from Rook, Pa., near Pittsburgh, to Connellsville, 56.1 mi.



Rough Topography

The main line of the Pittsburgh & West Virginia extends from Pittsburgh Junction, Ohio, an interchange point with the Wheeling & Lake Erie, to Connellsville, Pa.—interchange with the Western Maryland—a distance of 111.2 mi. The Fairbanks-Morse locomotives are currently confined to the Connellsville division—the eastern portion of the road—extending from Rook (Pittsburgh), Pa., to Connellsville, 56.1 mi., as shown on the map. This division traverses rough terrain high above the valleys of the Monongahela and Youghiogheny rivers, at a level well above their maximum flood stages. The ruling grade is 1.5 per cent eastbound and 1.3 per cent westbound. The maximum curvature is 11 deg. 39 min. There are numerous high trestles and bridges and three tunnels. Greentree tunnel, directly east of Rook yard, is 4,716 ft. in length and contains a 1 per cent grade westbound for more than half of its length, presenting some difficulty from steam locomotive exhausts, particularly on trains requiring helpers.

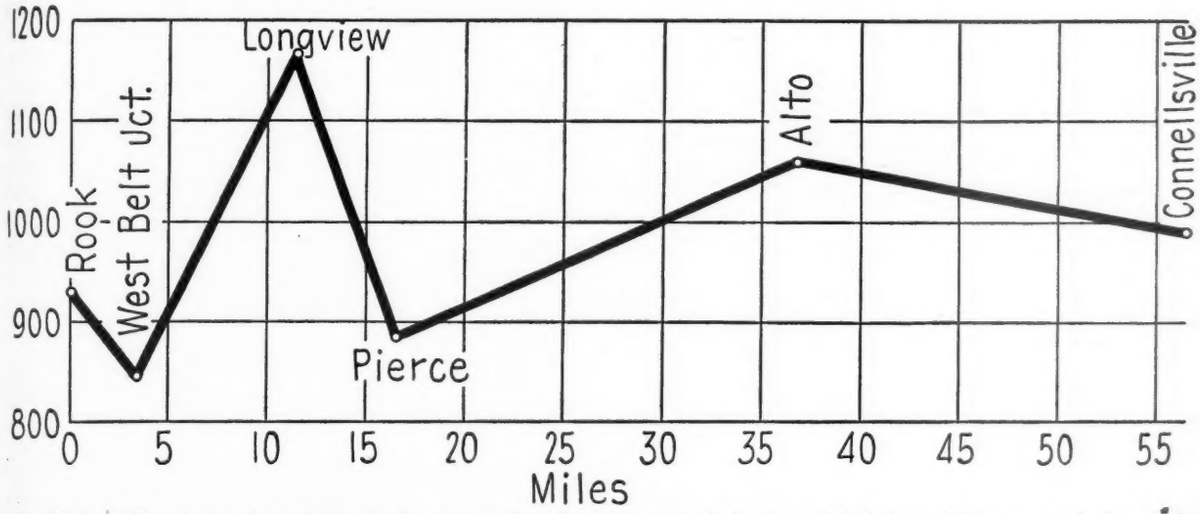
Steam locomotives used in through freight service over the Connellsville division are single-expansion

Table II—Reduced Transportation Costs During First Half of December Indicate Annual Return of 16.3 Per Cent on Investment

Savings through elimination of helper service on 4 trips—		
Wages and wage taxes	$ 145.29	
Locomotive repairs, enginehouse expenses, fuel, water and supplies	535.82	
	681.11	$ 681.11
Elimination of use of W. M. facilities at Connellsville—		
Water charges	30.00	
Turning charges	30.00	
Hostling charges	100.00	
	160.00	160.00
Fuel savings—		
28 tons of coal per round trip	2,633.40	
617 gal. fuel oil per rd. trip	1,308.00	
	1,325.40	1,325.40
Reduced overtime payments account shorter turn-around time	43.33	43.33
Total savings for first 15 days of December		$2,209.84

ECONOMICAL IN SHORT-RUN SERVICE

Multiple-unit operation of two 2,000-hp. Fairbanks-Morse locomotives cuts transportation costs in service on 56-mi. division

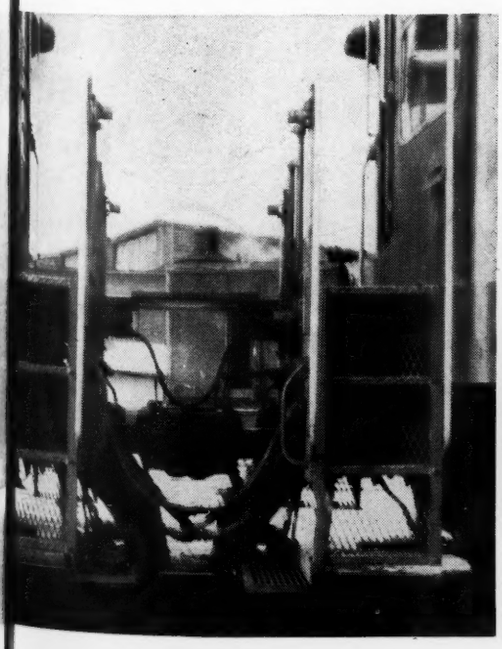


Simplified profile of the Connellsville division shows the elevation at principal points of deviation. Helper service is frequently required on steam-powered freight trains between Rook and Alto

2-6-6-4 type Baldwin-built engines, with a rated tractive effort of 97,500 lb. The Fairbanks-Morse units, operating in multiple, have a continuous tractive force rating of 85,000 lb. at 14.7 m.p.h., and a starting tractive force of 150,000 lb. at 30 per cent adhesion.

Because the preponderance of freight on the P. & W. V. is bridge traffic handled between the Wheeling & Lake Erie and the Western Maryland, schedules of regular trains and the turn-around time of locomotives are necessarily dependent on the schedules of the connecting roads. West from Rook yard both engines and crews are operated in joint freight service with the W. & L. E. It has therefore so far not been possible to work out schedules where the Diesel locomotives could be used to their fullest advantage on the P. & W. V. Hence, the new units operate exclusively

Below, left—The two Fairbanks-Morse units are operated cab-to-cab with a semi-permanent gangway between them. Right—The two 2,000-hp. locomotives are coupled for multiple-unit operation in road freight service. The plow-shaped pilot was built on by the P.&W.V. as a protection against small rock slides, and is a standard appurtenance of P.&W.V. road engines



on the Connellsville division. During the first 15 days of December, 1947, they averaged only 158 mi. each day, although their availability was almost 100 per cent. During this 15-day period, units Nos. 50 and 51, operating as locomotive No. 50, made 20 round trips, a total of 2,367 mi.

Over-the-Road Time Reduced

On 5 of the 15 days in this period, No. 50 handled manifest train No. 90 east, and extra trains west, the average elapsed time for the round trips being 8 hr. 42 min.—1 hr. 3 min. less than the average elapsed time of these runs when handled by steam locomotives during the other 10 days. Four of the eastbound trains hauled by the Diesel handled tonnage in excess of the steam locomotive rating and thereby eliminated the necessity of helper service eastward from Rook to Alto, 36.6 mi. See Table I for comparisons.

Use of the Diesel eliminates the need for servicing at Western Maryland facilities at Connellsville, including filling out the tender with W.M. coal, hostling and the use of the wye for turning. Results of the Diesel operation for this 15-day period are shown in Table II, all comparative maintenance charges being omitted since virtually none have yet been applied to the new motive power.

Other savings of an intangible nature which are expected to result from the operation of the Fairbanks-Morse units include elimination or reduction of per diem payments on account of faster over-the-road time with greater tonnage, permitting same-day deliveries of more cars to connections, and probable reduced track maintenance.

ESTIMATES REVENUE EFFECT OF RATE RISE

I. C. C. bureau puts annual-basis yield at $1,233,400,000, with $458,500,000 for East, $61,300,000 to Pocahontas region, $179,000,000 to the South, and $534,600,000 to West

Estimating the effect of the Interstate Commerce Commission's December 29, 1947, decision doubling the interim freight-rate increase authorized in Ex Parte 166, the commission's Bureau of Transport Economics and Statistics has put the yield in additional annual revenue at $1,233,400,000, of which it expects $458,500,000 to go to roads in the Eastern district, $61,300,000 to the Pocahontas region, $179,000,000 to the Southern region, and $534,600,000 to the Western district. The estimates were set out in the latest issue of the bureau's "Monthly Comment."

The commission's decision was reported in the *Railway Age* of January 10, page 36. The new adjustment substitutes an average overall increase of 17.5 per cent for the previous interim increase averaging 8.9 per cent which had been in effect since October 13, 1947. Thus the foregoing estimates of additional annual revenues reflect expected increases above the pre-October 13 rate basis.

The higher rates became effective January 5, except as to those on grain and grain products, which were delayed until January 15. Meanwhile the carriers have filed supplemental tariffs which limit the interim increases on various commodities to the maximum increases proposed on such commodities in the permanent proposal calling for overall increases averaging 30 per cent. This is designed to avoid the necessity for reparations payments in instances where the interim percentage increases would exceed the maxima set out in the permanent proposal.

The I. C. C. bureau's estimates allowed for these maximum-increase limitations, and also assumed that the increases would become effective simultaneously on intrastate as well as interstate traffic. The bureau calculated that the average increase of 17.5 per cent overall would reflect an increase in the Eastern district of 16.8 per cent, Pocahontas region, 12.6 per cent, Southern region, 18.1 per cent, and Western district, 18.8 per cent. It also found it of interest to relate the interim increases to the rates in effect June 30, 1946, as well as to those authorized in Ex Parte 162.

Increases Since June, 1946

"Additional revenue accruing from Ex Parte No. 162," the "Comment" went on, "is estimated at $1,200 million annually based on 1947 freight traffic volume. When this amount is combined with the estimate of the latest increase, freight revenue should aggregate $2,430 million more per annum than it would be if the rates of June 30, 1946, were in effect. In percentage terms, the new increase of 17.5 per cent applied to a level which included a 17.6 per cent increase over base rates results in a total increase of 38.2 per cent in basic freight rates and charges in less than two years. On the other hand, there were no permanent general increases between 1938 and 1946."

Another article in the "Comment" showed for Class I roads the percentage relationship of net railway operating income before federal income taxes to total operating revenues for the first 11 months of 1947 and 1941. The bureau called the net-before-taxes "operating net," and defended the use made of it by saying that its percentage relationship to gross operating revenues "is a useful measure of railway earnings, because it is based primarily on operating results without regard to the effect of federal income taxes."

The figures showed that the operating revenues for the first 11 months of 1947 were 62 per cent above those of the comparable 1941 period; and that the net railway

operating income before federal income taxes was 12.4 per cent of the operating revenue in the 1947 period as compared with 22.3 per cent in 1941. Out of this "operating net" plus any income from other sources, the bureau noted, the carriers must meet their fixed charges, take care of "miscellaneous deductions from income," and pay federal income taxes. It estimated the January-November, 1947, net after all such charges and deductions at $409 million as compared with $446.7 million for the same period in 1941, a reduction of 8.4 per cent.

Traffic Density

Traffic-density figures (net ton-miles per mile of road per day) presented for the first 10 months of 1947, 1946, and 1941 showed an increase in density of 10.7 per cent in the 1947 period as compared with 1946; and an increase of 39.8 per cent over 1941. The increase in the Western district of 54.6 per cent in 1947 over 1941 was more than twice as great percentagewise as in the East. However, the Eastern district's density figure of 12,389 net ton-miles per mile of road per day for the first 10 months of 1947 compared with Southern-region and Western-district figures of 6,903 and 6,307, respectively. Density was highest in the Pocahontas region—23,742 net ton-miles per mile of road per day in the 1947 period.

Data on railways in the hands of the courts showed that 44 roads operating 16,133 miles of line were thus involved as of January 10. This mileage compares with the peak of 77,013 miles involved in bankruptcy proceedings in 1939. Of the 16,133 miles still under court jurisdiction on January 10, about 9,800 miles were lines of 24 companies included in the Missouri Pacific system.

A graphic presentation of passenger-traffic trends was interpreted by the bureau as indicating that this traffic "has been declining so sharply from wartime peaks that coach and parlor and sleeping car passenger-miles are assuming the pattern of prewar relationships of these two types of traffic to personal consumption expenditures, revenue per passenger-mile, and the price level." The chart shows the relationship between actually reported passenger-mile figures and the "expected miles" computed on the foregoing basis by years from 1921 through 1946, and for the first nine months of 1947.

"From 1921 through 1940," as the bureau put it, "the relationship . . . was a close one, especially in the case of coach traffic. During the war period these peacetime relationships were seriously disrupted as indicated by the drastic increase in the variations of the computed passenger-miles from the actual. . . . There is now, however, ample indication of the resumption of prewar peacetime relationships. Temporary war conditions, such as troop movements, gasoline rationing, and commercial aircraft shortages, which contributed greately to the pronounced positive deviations have largely disappeared."

With respect to parlor and sleeping car traffic, the chart showed that the actual passenger-miles were substantially above the computed miles during the 1941-46 period; but the curve of "actual" was slightly below the "computed" curve for the first nine months of last year. The curve of coach passenger-miles, having shown the same general wartime behavior, had not returned to the level of the "computed" curve during last year's first nine months; but it was traveling rapidly in that direction. And the bureau read the chart as indicating that "yet further declines may occur in 1948."

It went on to suggest that the more rapid return of first-class traffic to peacetime levels "is partly attributable to air line competition." Figures presented in that connection indicated that the passenger business of the so-called scheduled air lines amounted to 32.9 per cent of the combined first-class rail and air line passenger-miles reported for the first nine months of last year. This left the railroad proportion at 67.1 per cent as compared with 76.9 per cent in 1946 when the air lines' proportion was 23.1 per cent.

With respect to the trend of coach traffic, the bureau suggested that the "less precipitous decline as compared with first-class traffic since the war may perhaps be attributed to the improvement in coach service as well as the continued shortage relative to demand for new private passenger automobiles." It added that "as this latter situation is corrected rail coach traffic may again drop to something more nearly approaching the computed peacetime levels."

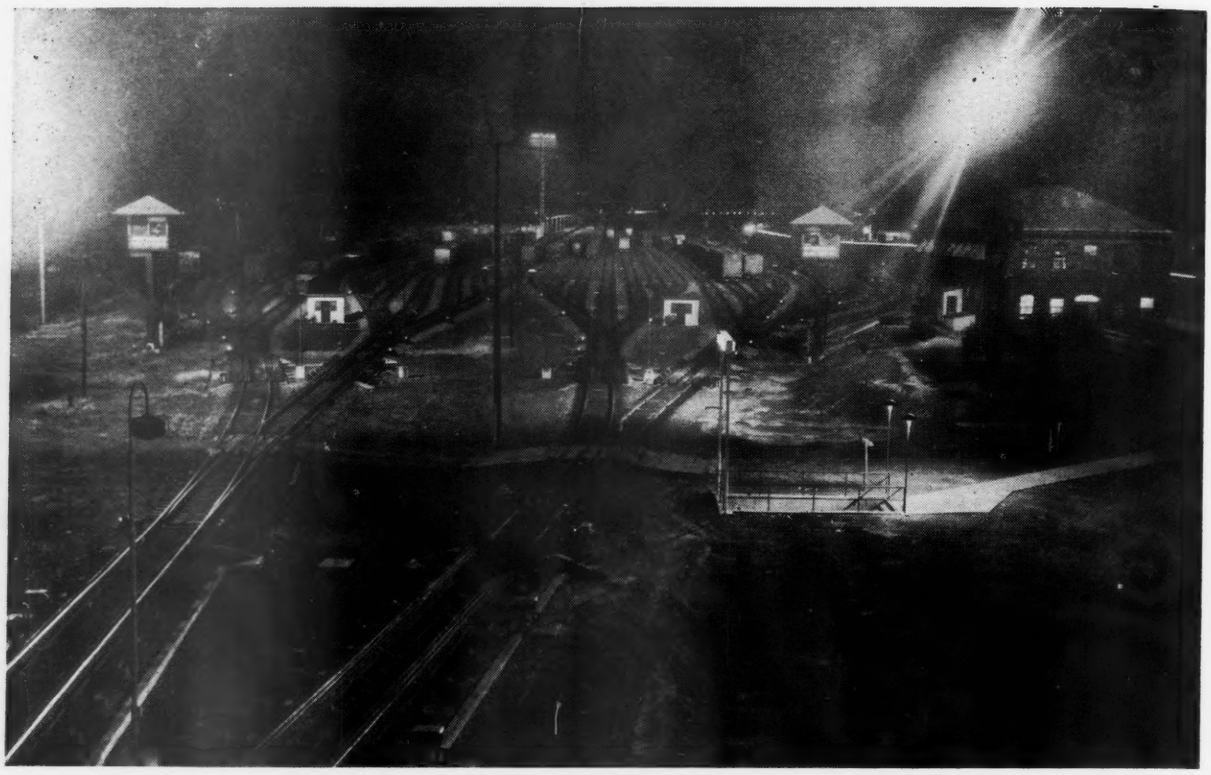
Another article showed on a percentage basis the tonnage data given in the bureau's recent statement which presented a one-per cent sample of intraterritorial and interterritorial movements of freight traffic as indicated on waybills submitted by Class I roads for the first quarter of 1947 (see *Railway Age* of January 10, page 43). The percentage figures showed that 53.6 per cent of the tons involved originated in Official territory, and that 57.5 per cent of the tonnage terminated there. Southern territory originated 15.4 per cent of the total terminated tonnage and accounted for 13.9 per cent of the terminations. Western Trunk-Line territory originated 11.3 per cent and terminated 11.7 per cent. The respective figures for Southwestern and Mountain-Pacific territories were 9.6 per cent and 8.9 per cent, and 9.1 per cent and 8 per cent.

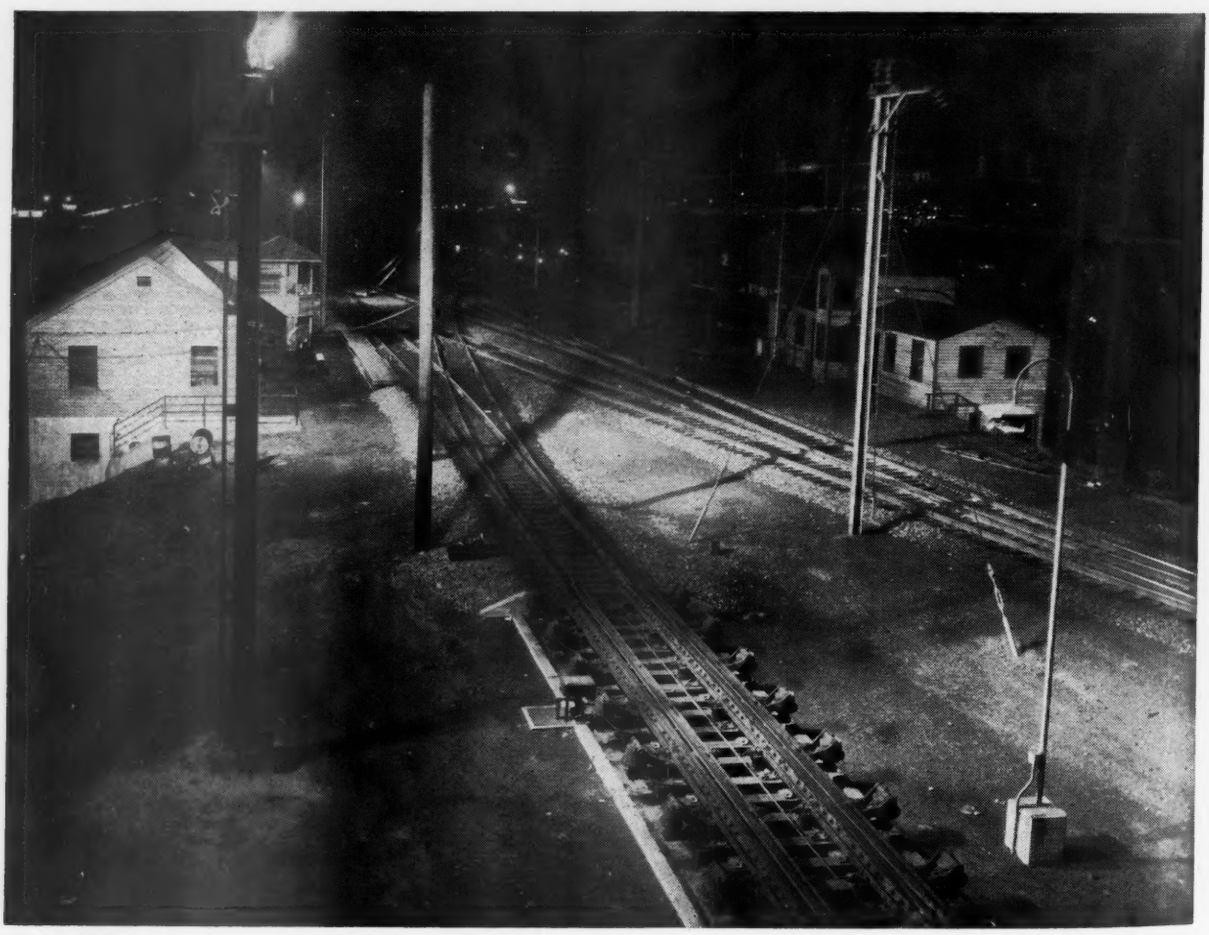
The bureau called attention to the showing in these figures that intraterritorial traffic "is by far the most important type of traffic from the tonnage standpoint." The indicated overall intraterritorial proportion was 85 per cent, the range being from 92.2 per cent for products of mines to 61.8 per cent for animals and products.

November Traffic Above October

The usual analysis of latest revenue results showed that the freight revenue for November was 0.4 per cent more than in October, after adjustment to a 30-day month of four Sundays; and it was 23.6 per cent more than in November, 1946. November passenger revenue, on the same basis, was 1.5 per cent more than that of the previous month but down 13.9 per cent from November, 1946. The freight revenue index (based on the 1935-39 monthly average as 100) was 248.7 for November. Like October's 247.6, this exceeded any of the war period indexes. The comparable figure for November, 1946, was 201.2. The November passenger revenue index, at 217.3, compared with October's 214.2 and November, 1946's 252.3

Net railway operating income for the 12 months ended with November was $803,829,000 and net income was $493,068,000. These compared, respectively, with $474,027,000 and $123,966,000 for the 12 months ended with November, 1946, and with $964,247,000 and $569,697,000 for the 12 months ended with November, 1945.





Above—General view of the classification-track layout at Potomac yard, showing the effectiveness of the night illumination afforded. Below—Looking down from the southbound hump. Note concrete foundation under the car retarder and sturdy track construction

NEGLECTED YARD MAINTENANCE IS COSTLY

When all factors are considered, including high costs, damage claims and shipper ill-will, roads can afford nothing less than adequate facilities to avoid terminal delays*

By **W. T. RICE**

Superintendent, Richmond, Fredericksburg & Potomac
Potomac Yard, Alexandria, Va.

The maintenance officer can serve his company best if he spends wisely the funds that are available for labor and materials. He can help reduce the operating ratio by keeping the tracks and structures maintained in accordance with the demands of modern operation. This applies in yards as well as on the main line. Accordingly, the question may well be raised whether the demands of yard maintenance have changed in recent years, and whether our old practices of employing small track gangs in yards, and of using worn-out material from the main line, are practical and economical today. These questions can be answered correctly only in the light of a careful cost analysis of the particular yard and terminal operations involved.

No Time for Yard Delays

In recent years the railroads have spent millions of dollars for heavier and more powerful locomotives, better equipment and tracks, and intricate signal systems to move freight faster from terminal to terminal. Yet, all too often the advantage in time saved on the road is lost in yards, where long delays are suffered due to poorly maintained and inadequate facilities. The impetus of fast freight must be continuous from receiving yard to dispatching yard. We tell the shipping public of our fast freight service, and we must produce this service if we are to keep the business on the rails. We must not forget that the trucks and boats are back—that we again have competition. Fast freight-train schedules require yards well maintained and with adequate facilities to insure prompt and safe classification and dispatch of trains.

I recently heard an executive of one of our large railroads say, "The running time of our freight trains is splendid, but the standing time in yards is terrible." We, as maintenance men, must provide the facilities to help decrease this yard standing time.

A typical example of the need for good yard maintenance is seen in the movement of the perishable traffic from the southern states of Florida, Georgia and the Carolinas to the Middle Atlantic and New England states. This traffic is on a third-morning delivery schedule in New York—which allows no time for yard delays. Several trains are received daily at our Potomac yard (Alexandria, Va.) with cars, originating on two railroads, that have not been iced since leaving their initial terminals. These cars must be re-iced, inspected for interchange, classified to move out in destination blocks over two other railroads, assembled into outbound trains and dispatched—all in four hours. If a tie-up occurs due to poor track conditions, many of these cars will miss their scheduled connections and will not be placed for unloading in New York until the fourth morning. As a result we must pay the difference in the market value of the produce if the market drops—and it usually drops if cars are delayed. I have seen claims on delayed traffic run as high as $300 a car. Today the railway officer must look at the overall picture in computing the cost of yard maintenance. He must consider not only actual cost of constructing and maintaining yard facilities, but also the cost of *not* providing the service advertised. In our advertising campaigns, there is no equal for a satisfied shipper.

High Standards Desirable

Good maintenance and modern yard facilities are economical. We have found that stone ballast is economical on busy humps and to support the switches at the hump ends of receiving and classification yards. The original grade laid out over the hump represents the ideal condition for any yard, and any uneven surface that develops will show up in the way cars stop on the leads or fail to clear in the classification tracks. Well-tamped, stone-ballasted track adjacent to retarders will reduce the need of trimmer engines. No hump operation, no matter how well planned, can be fully satisfactory unless the cars roll at uniform speed into the classification tracks after leaving the retarders.

Heavy rails in heavy-traffic areas—such as over humps and through important switches—will save track labor and expedite traffic. The idea that we can get by with light, worn-out rail in a busy yard is costly. All interruptions to movement are expensive because they delay traffic and cause unproductive train- and engine-crew time.

The installation in heavily used yard tracks of badly worn frog and switch material from the main line is often false economy. The use of worn rail for stock rails with new switch points has ruined many a good switch. The cost of frequent installations often offsets all the savings that may be gained through the use of worn frog and switch material in busy yard tracks.

Sharp turnouts are expensive to maintain and difficult to operate over. The operating people hate a restricting switch or curve. Frequently a six-foot rule

* Adapted from an address before a recent meeting of the Maintenance of Way Club of Chicago.

and a piece of string will help solve the problem of reducing curvature and adjusting alinement.

Permanent grade stakes for yard tracks will permit the necessary refinement needed where cars are moving by gravity. These stakes should be located on hump grades so the foreman can check the grade frequently, and thus assist the operating department in preventing heavy car impacts in the classification yard.

At one time we had difficulty in getting cars to roll in the clear on the outside tracks of our 48-track northbound classification yard. It was often necessary to have a trackman oil the outside rails on the curves leading into these tracks. Later a rail-flange lubricator was installed on the hump and the trouble was corrected.

Sodium vapor lights are quite valuable at retarder locations in areas where heavy fogs occur. At Potomac yard—which is located along the Potomac river—heavy fogs are common in the fall and spring. The retarder operators tell me that sodium vapor lights, so located that cars must pass between them and the lights while entering the retarders, are very helpful in determining the location and speed of cars.

Adequate floodlights are of the utmost value in increasing the production of yard night forces. Furthermore, in a well-illuminated yard personal injuries are reduced. We installed a very extensive system of floodlights in our southbound classification yard and favorable results were noted immediately.

More emphasis is being placed on yard drainage than ever before. Engineering forces should always consider any drainage problems and work out the best solution. Yards that are properly drained will cost less to maintain, and the efficiency of employees will be increased. No one likes to walk through water, and ice presents a serious hazard. Good drainage is particularly desirable in enginehouse territory where water is wasted and many employees are working.

Yard Supervision Important

The yard track foreman must be of the highest caliber. He does more switch work, handles more kinds of materials, and must perform more types of services than any other foreman in the maintenance-of-way department. He must be able to lay out and build a first-class switch, install a retarder, be an expert in wrecking, keep accurate records of materials, and, at the same time, know how to get a cow up that is down in a stock car. His ability and ingenuity can save many dollars for his company. The modern yard is no place for the second-rate foreman.

The track gangs must be of sufficient size to perform the work without delay to the operating department. Busy tracks cannot be released for indefinite periods while an inadequate gang struggles to complete renewals or repairs. It is better to have sufficient forces in the yard to do preventive maintenance than to have

Hump end of the northbound receiving yard. All switches are No. 10, of 130-lb. material

to renew ties or correct the gage in the middle of the night after an engine has found the weakest spot in a piece of track.

Plan with Operating Department

All planned renewals or changes should be worked out jointly with the operating department. Through such cooperation its needs can be met and frequently the cost of doing maintenance work can be reduced. Such factors as off-season traffic, hours when tracks can best be put out of service, and additional power that will permit greater use of the track by the maintenance forces should be considered with the local operating officers well in advance of each job. Getting the desired attention may require a little pressure from "upstairs" at times, but it will save dollars for the railroad. Time claims from operating unions can be reduced while certain work is going on if the operating supervisors are consulted and their knowledge utilized. When we renewed a retarder and adjacent switches at Potomac yard recently, maintenance and operating forces jointly figured out the days and hours when this section of the yard could best be out of service. As a result, with no delays to traffic, the tracks were taken out of service for ten hours and the entire job was completed. In a like manner we renewed all of the switches next to the hump in our northbound receiving yard. The maintenance forces planned the job weeks in advance with our operating people and full information was published to the yardmaster, conductors and trainmen as to the work to be done. Again, a big job was completed without disrupting operations.

Hidden Cost of Poor Maintenance

The maintenance forces seldom see the files on claims resulting from delayed or damaged freight. A yard tie-up due to spread track, a worn switch point or excessive curvature is usually regarded by the maintenance man in terms of what it costs in labor and material to clear up the trouble. The real cost, however, frequently lies in the claims that must ultimately be paid due to delayed or damaged freight.

The delay suffered by individual cars in a yard tie-up is not all that is involved in such a tie-up. The operating department usually keeps crews down to the minimum, and when one of these crews is involved in a derailment or in handling a wreck train, other yard moves must suffer or additional power must be put in service.

The high wage level of all classes of employees makes wrecking during the night a very expensive operation, for which nothing constructive is gained by the road. Furthermore, a track gang that has been trouble-shooting all night has little value as a maintenance gang the next day. Added to these tangible costs are the intangible costs due to lost business through poor service.

Housekeeping

A little "eyewash" is good as a morale builder and encourages employees to take pride in the appearance of their yard. The prompt removal of scrap and worn-out track materials upon completion of a job will remove many tripping hazards and other causes of personal injuries. Personal injuries are expensive both in man-hours and dollars; it pays to remove the causes of them before injuries occur. Provide empty barrels for trash on humps and where employees gather. Employees will soon learn to use them.

You may well ask, "Where will we get the money for the labor and materials to maintain our yards in such a manner?" In some cases we are penny-wise and dollar-foolish in our yard maintenance. We must establish a higher goal and approach that goal as closely as possible. In the light of the necessities of modern operation, we must consider the overall picture. We can't afford *not* to have a high standard of maintenance in our yards where traffic demands such maintenance.

T. & P. SEEKS FRIENDS AMONG EMPLOYEES AND PUBLIC

Since the inception of a department of public and employee relations on the Texas & Pacific in August, 1945, a constantly growing program of activities has been carried on by this department. In October, 1945, an employees' magazine was started, with a present circulation of 16,000 copies. A Red Cross first-aid detachment was formed in the general office at Dallas. This group of first-aiders served 947 employees in the first eight months of 1947. A group of 60 employees in the Fort Worth shops and approximately 75 employees in the Marshall shops have completed advanced first-aid training and equipment has been provided to each group to render first aid. The result has been that a large number of employees have become more "safety-conscious."

A Texas & Pacific women's chorus of 33 members and a male chorus consisting of 30 members were organized the early part of 1946, all members being employees in the Dallas general office. The only "outsider" is a director. These choruses have put on a

large number of programs, one at Marshall drawing a capacity crowd of 900 people and another at Big Spring a capacity crowd of 1,400 people. They are constantly in demand, especially around Dallas. There is also a T. & P. quartet which provides programs for civic clubs and chamber of commerce functions.

A "Forty Year Veterans and Retired Employees Association" was organized in 1946. The members of this organization were given an excursion and sightseeing trip to New Orleans this past fall by the company. Three Pullman cars and a diner were furnished for the exclusive use of the veterans.

Employee recreational clubs have been organized at the principal points on the railroad and most of them, in season, have softball teams and bowling leagues. A speakers' club has been organized at Dallas. It meets twice monthly and employs an outside instructor and critic.

Soft drink vending machines have been placed in the general office building in Dallas, and in shop and terminal facilities at the principal points where there are employee clubs. The net proceeds from these machines go to the clubs to defray expenses for recreational purposes. This means of financing has served to encourage the formation of new clubs and to increase recreational activities.

Bulletin for Supervisors

To keep employees informed as to the problems confronting the railroad and the industry as a whole, the company issues pamphlets and reprints of editorials and other articles which are distributed regularly with pay checks. The department has recently started publishing a monthly bulletin called "Railnews," which goes to all officers and supervisors, designed to establish closer relations between departments. This monthly publication carries news pertaining to the major activities of the various departments so that each may know in a general way what the other is doing.

All of the 700-odd employees in the general office were given a trip at company expense to Marshall so that they might see the extensive operations at that terminal. Trips were arranged on successive Saturdays in groups of approximately 75 and a special coach and diner-lounge were provided for their exclusive use. To a great many of employees Marshall had previously been "just another station on the railroad." They had no idea of the magnitude of the company's terminal and shop facilities at that point and they came back with increased knowledge of the company's operations.

Club rooms have been provided at Toyah, Tex., and Baird, for trainmen who must tie up at these points. These rooms provide showers, lockers, a library of books and magazines, pool tables and other appropriate recreational facilities.

Early in 1947 service buttons were awarded to all active and retired employees, the style of button varying with the years of service. The 20 active employees who had been with the company 50 years or more, as of last June, were invited to Dallas to a special luncheon at which President Vollmer presented the service buttons. An "award of merit" certificate suitable for framing is presented each employee upon retirement, along with a personal letter from President Vollmer expressing appreciation for loyal service and extending the hope that he will enjoy his retirement. Business cards showing the position held upon retirement are furnished the pensioner and he is urged to continue to consider himself a member of the T. & P. family even though he has retired from active service.

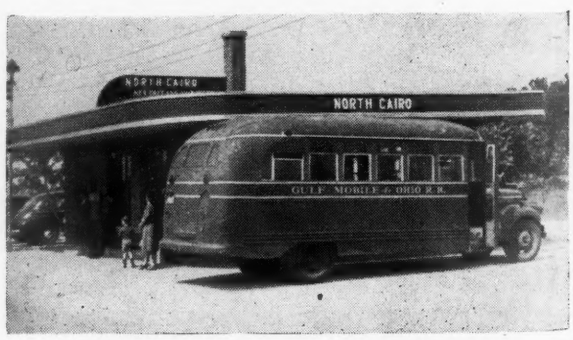
The company in 1947, for the first time, issued an annual report to employees. This was followed up several months later with a questionnaire to determine how the report was received and whether it was understood. The questionnaire produced a number of useful suggestions and indicated that 90 per cent of the employees favored the innovations.

The department in 1946 inaugurated a campaign to promote public awareness of the danger at highway crossings. Officers of the railroad appeared before principal civic clubs along the railroad and made 15- to 20-minute talks. These were followed with the distribution of a cartoon booklet entitled "Stop, Look, Listen and Live!"—not only among the civic clubs, but among high school boys and girls located at points on the railroad. This was followed with a "safety study map" which was distributed among the high schools. For popular education, the company also has a 15-minute sound-slide film dealing with crossing accidents. A 10-minute recording has been made dealing with the same subject which is made available as a public service to the radio stations. There are many small stations along the T. & P. and most of them have expressed a desire to present this transcription.

As an educational measure the public relations department prepared a booklet dealing with the different taxes paid by the railroad [see *Railway Age,* November 1, 1947, p. 52]. It was also made available to schools, and copies were sent to stockholders.

Some months ago the company wrote stockholders giving them the name, address and telephone number of the traffic representative located nearest them and suggested that he be contacted if he could be of service. Additionally, stockholders were sent material pertaining to the major activities of the railroad and the railroad industry. The response is reported to have been most encouraging. A personal letter is addressed to all new stockholders welcoming them to the company.

In commemoration of its 75th anniversary, the company published in 1946 a 50-page history, of which more than 20,000 copies have been distributed.



G. M. & O. shuttle bus carries passengers between this modernistic station at North Cairo, Ill., and Cairo

MATERIALS-HANDLING SHOW A HUGE SUCCESS

Railroad men interested in equipment and technical sessions—Final registration of visitors runs over 15,000

Great was the interest shown by both railroads and industry in the second annual Materials Handling Exposition, sponsored jointly by the Materials Handling Institute and the materials handling division of the American Society of Mechanical Engineers, and held during the week of January 12-16 at Cleveland, Ohio. Railroad men from all departments and from all sections of the United States and Canada were in attendance. The exhibits took up over 200,000 sq. ft. of floor space in Cleveland's Municipal Auditorium and included over 1,200 pieces of equipment, ranging from fork trucks and pallets to huge cranes, monorails, strapping and banding material, containers and boxes of all types and materials, and small operative models of fork trucks, all designed to speed up the movement and make less subject to damage all the various commodities handled by American industry.

Other outstanding features of the exposition were movies on material handling subjects, and technical sessions in which the speakers dealt with the particular problems faced by their respective industries in the economical handling of the various kinds of materials and packages. Also there was a huge show held on the afternoon of the 14th at which much of the displayed equipment was used in demonstrating how it might handle the loading and unloading of vehicles.

The first technical session was opened, appropriately enough, by a materials handling consultant, Ezra W. Clark, Battle Creek, Mich. He suggested that mechanized materials handling was the great hope for reducing waste energy as well as waste in time and capital, thus bringing about a better America, and that this might well be taken as the theme of the exposition.

Careful Selection Urged

J. L. Cooke, executive vice-president of the Lehigh Warehouse & Transportation Co., Newark, N. J., the next speaker, stated that all transportation agencies should immediately call in materials handling consultants in order to help cut the costs of distribution, which he said might represent as high as 59 per cent of the consumer's dollar. He emphasized, however, as did later speakers, that anyone buying mechanized equipment should not let himself be talked into buying just any piece of machinery or tool until he was certain that the tool fitted his particular needs. He also asked the sellers of such equipment to be honest with the prospective buyer and not sell him something they knew was not going to benefit him to the extent that it should.

While Mr. Cooke warned those present to make sure that purchasers should take into account peculiarities in their operations when buying equipment, Professor A. B. Cummins, chairman of the department of industrial organization and management, Western Reserve University, warned his listeners to be careful in assuming that any one place was "too different" for comparison with others. "Insolvency lists are made up of shops that became *too different.* Get worried! Be uneasy with imperfections," he urged.

Rates on Pallets

W. B. Dalton, Sr., general operations manager of the Kraft Foods Company, Chicago, Ill., said he hoped that some day there would be a pallet pool featuring the exchange idea, which he thought would be of great value to the transportation agencies of the country as well as to the other industries. He stated that his company was saving about 75 per cent in handling time at plants where it was shipping and receiving via the pallet method. He suggested that the turn-around time of vehicles could be reduced to a matter of hours rather than days by establishing reasonable freight rates for pallets, on both the loaded and empty return movement. Another speaker, W. B. Watson, traffic manager of H. J. Heinz, Ltd., Leamington, Ont., Canada, pointed out that Canadian railroads already had made some concessions along this line.

Curtis H. Barker, Jr., national chairman of the materials handling division, American Society of Mechanical Engineers, predicted that within the next decade "we will see unit-loaded rail shipments . . . in use for better than 60 per cent of all carload movements and, in addition, most railroads will be equipped to handle less-than-carload shipments in unit loads at all heavy traffic centers."

Continued shipper interest was indicated by the suggestion, reported in *Railway Age* of January 17, that the Association of American Railroads publish and keep up to date a list of the railroad freight stations in the United States at which mechanized equipment is available for the handling of unit loads, whether carload or less-than-carload. Thus, special freight rates or not, shippers would be able to avail themselves of the advantages of mechanized handling at both ends of the line.

D. L. Burton, engineer of the Bakelite Corp., Bound Brook, N. J., struck a happy note for many of his listeners when he suggested that manufacturers of fork trucks and other equipment should begin to think about standardizing their products for reasons of safety, maintenance and repairs, and in order to

(Continued on page 53)

REGIONAL STANDARDS FOR LOCOMOTIVE FUEL

Need for a better fuel for steam locomotives than run-of-mine to improve locomotive availability and reduce cinder and fly ash nuisance—Mines mechanized to reduce cost—Regional or individual mine standards proposed

By **EARL C. PAYNE**
Consulting Engineer, Pittsburgh Consolidation Coal Company

Before starting this discussion of coal for locomotives, it would seem appropriate to mention some persistent rumors concerning the availability of liquid fuels for locomotive use. It is my understanding that a severe shortage of domestic oil is anticipated this winter and that every effort is being made to restrict the unbridled installation of oil burners in the homes. To my knowledge, several industrial users have converted to coal this year because of the predicted shortage of fuel oil; and several new installations which were originally set up for oil have been changed to coal because of inability to obtain reasonable future commitments on fuel oil. Public statements have also been made predicting shortages of No. 3 Diesel oil and prices equal to gasoline, less the tax, are forecast for this grade. It has also been suggested that the railroads make plans to use No. 5 grade for their Diesel oil requirements in the future instead of No. 3.

We also hear that our national defense plans call for fantastic quantities of synthetic fuel to supplement our natural petroleum products. The production of synthetic fuels is still in the experimental stage, and the tremendous plants to produce the quantities being discussed require so much time, material and money that they will completely dwarf the synthetic rubber program of World War II.

The stock-piling of critical materials is also being considered. Tremendous reserves of bituminous coal are stock-piled in the safest possible place—underground. Production facilities to convert into usable grades of liquid fuels, from our natural reserves of petroleum, natural gas, oil shale and coal, will be highly vulnerable unless they are placed underground. Finished products also must be placed underground; and to meet foreseeable demands, this looks like a twenty- to fifty-year program in which the volume in barrels and gallons may be receiving more thought than the cost per gallon.

No one seems concerned about the equipment manufacturers who are helping to create these additional demands for liquid fuels. The building and installation of domestic oil burners continue unbridled. The purchase and construction of Diesel power plants also continue without serious consideration to fuel supply. During the last war, the railroads carried practically the entire transportation burden with coal-burning steam motive power. It is rather frightening to think what will happen in a future national emergency when there is a mad scramble for a limited supply of liquid fuels by the army, the navy, the air force, self-propelled projectiles, civilian domestic heating, trucks and automobiles, commercial aviation, stationary power plants, and—on top of this— railroad requirements of fuel for both steam and Diesel locomotives.

It would seem that the time has arrived when we should know where we are heading and begin fuel planning on a national scale. A National Fuel Planning Board might well be formed under the Secretary of the Interior, composed of representatives of the petroleum, gas, coal and synthetic fuel industries. The knowledge and experience of these industries should be combined for the formulation of a national fuel policy in the public interest.

If these thoughts make sense, then it would seem that the railroads are approaching a blind, unprotected crossing and that a familiar sign should be installed, "Stop, Look and Listen," before replacing or scrapping or discontinuing the purchase of coal-fired steam locomotives.

Meeting Railroad Demands

In the last few years, the author has interviewed hundreds of railroad men in positions ranging from switcher and fire cleaner to and including the president on the question, "What should the coal industry do to help improve the competitive position of the coal-fired steam locomotive?" The answers all seem to boil down to this: "Give us better and more uniform quality coal at low cost." Many producers have attempted to do this kind of a job for most of their customers because of competition. Why should the railroads be an exception?

This trend away from coal-burning steam motive power is, in a great measure, the result of capitalizing upon a chronic weakness of the steam locomotive. This weakness is in availability. My diagnosis of this chronic illness leads me first, to prescribe a change in diet as of vital importance in restoring these big brutes to health. Better quality and more uniform locomotive fuel will make locomotives run better longer. The coal producers are slowly realizing that this so-called interdependence between them and the railroads is failing to perpetuate the use of coal as a locomotive fuel. It should be admitted that about 85 per cent of bituminous coal is shipped by rail because it is the cheapest and most satisfactory transportation. Interdependence is disregarded when it becomes more advantageous to use lake, river, tide, canal, or truck transportation.

A paper contributed by the Fuels Division and presented at the annual meeting of the American Society of Mechanical Engineers held at Atlantic City, N. J., December 1-5, 1947.

Some of the railroads pride themselves on their protection of producers on their lines and publicly acclaim the interdependence of the coal and railroad industries; but if competitive conditions in the transportation field become more severe, they will be found deserting their middle-aged, dependable drudges of menial labor, the steam locomotives, for something with better availability and lower operating cost; and if they cannot get it with a modern steam engine, they will probably select one of these popular and glamorous Diesel sirens which may, in turn, desert the railroad at the first strains of martial music in the air.

Because of this mutuality of interests, and also because it is just good business, it should certainly be the job of the coal industry to furnish the railroads the locomotive fuels that they can use to best advantage. This may be one of the cosmetics that will keep railroads interested in the old girl they now have.

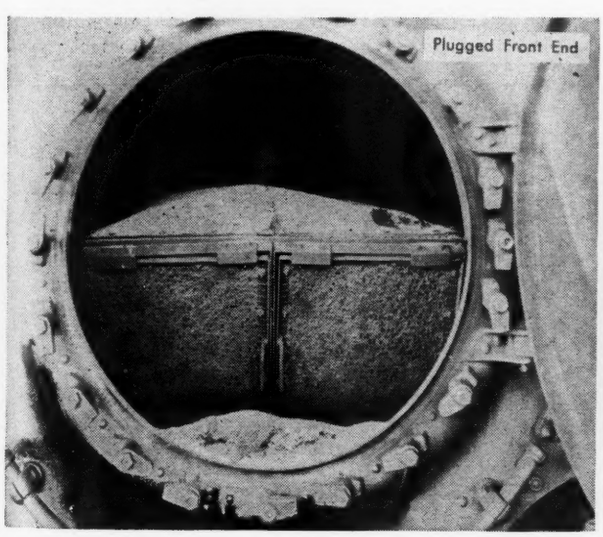
Mine Mechanization

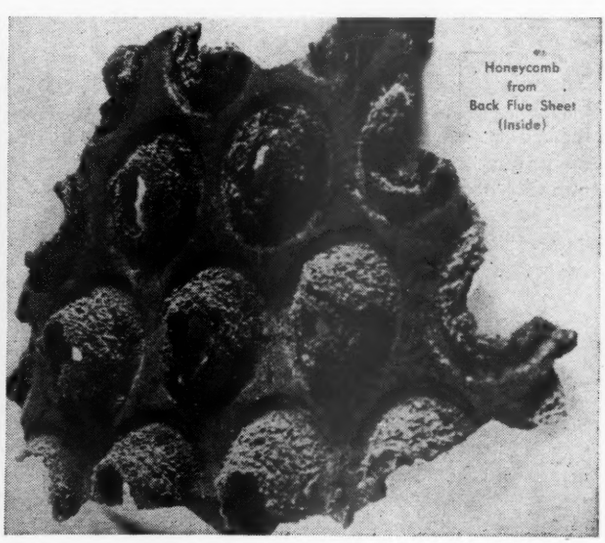
Providence has given this country vast reserves of bituminous coal which—at present rates of consumption—will last for the next 3,000 to 4,000 years. Mining technique is still in its infancy, but it is highly probable that present methods of extracting this coal from the earth will change radically before these reserves are exhausted.

In 1946, the direct labor cost for coal was 62.1 per cent of the total cost of production. During a period of comparative scarcity of all fuels such as the past few years, this high labor cost is only a small handicap in competing with the so-called "laborless" fuels, oil and gas. As all fuels become more plentiful, the old law of supply and demand will regain control of the price relationship between fuels. Looking to the future, the coal industry is striving to reduce production cost to protect, not only the 20 per cent of the tonnage which is used by the railroads, but also the other 80 per cent which moves to the domestic users, utilities, industrial consumers and others. Mining costs must be held to a minimum as a matter of good management and, incidentally, to meet the competition of oil, gas and water power.

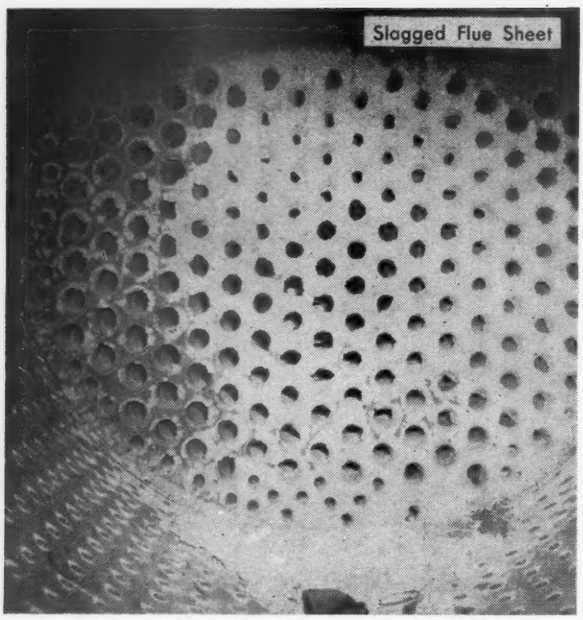
Producers who expect to survive the next competitive era are now mechanizing their mines underground as fast as possible in the latest accepted way, to offset the rapidly increasing cost of labor. Individual producers and the industry as a whole are also investigating revolutionary mining methods. A research program will soon be launched by Bituminous Coal Research, Inc., with the objective of developing machines which will cut and load coal at the face continuously, instead of intermittently, as at present. Experiments are also under way in underground gasification. With the knowledge that these research studies are under way, the railroads should have ample assurance that the coal industry is trying hard to keep the cost of locomotive fuel as low as possible, not only for the present but for the future.

Unfortunately, underground mechanization results in higher ash, wider quality variations and an increased percentage of the fine slack sizes which the railroad men ask to be held to a minimum. Mechanical preparation facilities must be installed to maintain quality and uniformity standards and to prepare coal sizes which a wide variety of consumers require. This type of cleaning and preparation plant, together with underground mechanization, requires a tremendous investment. This investment must be justified by the reserves accessible to the mine mouth because, when the coal is gone, machines and facilities must be moved or fully depreciated. It is also essential that the prices for the various sizes produced represent a good value to the customer, so that he may continue to use them advantageously; and—equally important—these prices must also yield a fair margin of profit to the producer, so that he may continue to serve the consumer. Consumers that can use a particular size to greatest advantage will set the price for that size. Competitive and performance facts are available from most consumers to show them what they can afford to pay, but





Right—Slag removed from a rear flue sheet. It doesn't take long for this to cut down steaming
Left—A plugged front end. This is one result of improper fuel



A slagged flue sheet. This can happen in less than 100 miles and indicates something wrong with the locomotive fuel

there is no general agreement between the railroads and the coal industry which would indicate the coal size which the locomotive can use to best advantage from each coal district or mine, and there are no facts available on which to base the value of the optimum locomotive fuel size relative to that of raw run-of-mine size from the same mine opening.

Obviously, the availability of optimum locomotive fuel sizes at proper relative values is dependent upon mutual agreements which can only be worked out by long-range fuel planning and supported by supply relationships which have the prospect of reasonable continuity. The tremendous tonnage required by the railroads and the tremendous investments which must be made to provide this tonnage at low cost would certainly seem to justify fuel policies which are based on something more substantial than estimates, custom, or caprice.

Facts are required, and the place to get them is in a test plant where conditions can be standardized. These factual data will be tangible, and to them must be added the intangible or experience data covering the effect of optimum performance on availability, maintenance, fuel and ash-handling costs, and the nuisance factors of smoke and fly ash. All of these factors make up overall operating costs and the general acceptability of the coal-fired steam locomotive to the railroads and to the public.

Regional Fuel Standards

This development of factual information which producers and their railroad customers both need for long-range planning and future supply relationships leads to the establishing of locomotive fuel standards for each region or individual mine producing a substantial quantity of locomotive fuel. The author presented a paper, "Locomotive Fuel Competition," to the annual meeting of the National Coal Association in Cleveland, Ohio, on March 14, 1946, in which it was recommended that regional locomotive fuel standards be established: "Fuel standards which are recognized by both the railroads and the coal industry as the best for general locomotive use." These standards are to be applicable to coal for road locomotives. There was much favorable comment, both written and oral, to this proposal. There was a reluctant admission that the honeymoon years of coal of any kind or size for locomotive use are almost over, and that something drastic must be done to improve the preparation of the coal for the railroads.

Run-of-mine coal always has been, and is still, the predominant size used for locomotive fuel. The table shows the tonnage shipped by producing districts Nos. 1 to 11 for this purpose during the twelve-month period ending September 30, 1946. Over 61 million tons was run-of-mine or resultant sizes, with a top size over 2 in. Out of a total of approximately 90 million tons, a little over 23 million tons was lump or double-screened coal, and approximately 5½ million tons was screenings with a top size of 2 in. and under. In my opinion, not more than 10 per cent of the total tonnage shipped for locomotive use was the best size that could have been made available from each mine for this purpose.

Railroad locomotives today must operate with higher steaming capacity, faster acceleration, greater speed, less cut-outs, fewer steam failures, and lower maintenance. Fuel consumption per 1,000 gross-ton miles must be reduced. Railroads agree that steam locomotives are greatly handicapped in meeting present motive power requirements because of inferior quality, lack of uniformity and the relatively high cost of coal. Coal producers are complying with the railroads' demands for lower cost by mechanizng the mines underground. They are installing mechanical cleaning equipment because raw run-of-mine will satisfy the need for improved quality and uniformity. In most cases, it is uneconomical to clean mechanically the fine slack sizes, so that their complete or partial elimination at large numbers of mines will help to meet the railroads' needs.

Naturally this is not the answer for every mine shipping railroad fuel. Some of the superior-quality coals, and others which are still hand-loaded, maintain excellent quality and uniformity without mechanical

Classification of Bituminous Coal Furnished to the Railroads—12 Months Ending September 30, 1946

Producing district	All lump and double-screened sizes	Natural, modified and screened run-of-mine and plus 2-in. resultants	Natural and dedusted screenings 2-in. and smaller	Total tons*
1	338,595	5,264,825	193,367	5,796,787
2	1,334,255 (5)	8,830,059 (4)	516,124	10,680,438 (5)
3	2,703,328 (3)	8,589,098 (5)	200,317	11,492,743 (3)
4	1,524,099 (4)	9,130,369 (3)	270,221	10,924,689 (4)
5	219	...	46	265
6	33,670	1,024,253	13,459	1,071,382
7	46,484	558,045	121,210	725,739†
8	1,311,255	10,150,027 (1)	1,905,961	13,367,243 (2)
9	1,241,473	5,336,035	226,939	6,804,447
10	9,261,980 (1)	9,179,215 (2)	1,855,875	20,297,070 (1)
11	5,425,974 (2)	1,365,071	159,031	6,950,076
Ex-Tide	...	2,350	35,912	38,262
Ex-Lake	36,022	1,640,188	177,594	1,853,804
	23,257,354	61,024,535	5,676,056	90,002,945

* Where totals do not add, the difference is in sizes not known.
† Total includes 29,350 tons additional in unknown sizes.

cleaning. In some cases, the ash-softening temperature and the burning characteristics of coal containing a high percentage of slack are no serious handicap to the performance or acceptability on the railroads which find it advantageous to use such coals. However, public opinion may eventually force the railroads to use every available means to reduce their stack emission of unburned carbon and fly ash. One good way to do this is to put less fines into the firebox.

Application to Stationary Plants

For example, at a burning rate of 100 lb. per sq. ft. of grate per hour, the loss due to unburned carbon is 14 per cent lower for 4-in. by ⅜-in. egg coal than for run-of-mine coal of practically the same B.t.u. content. Factual information of this kind, showing this relative value between run-of-mine and prepared sizes from the same mine, should be determined for many of the typical coals which the railroads of the United States and Canada are now using. If such facts were available for guidance in making supply relationship between the producer and his railroad customer, the agreements could be made with greater confidence and result in better continuity.

The vast majority of the tonnage used by the railroads, however, is not of the best quality, uniformity, or size for these mobile power plants. Limitations in space and weight and volume would seem to indicate more critical coal specifications. Fuel flexibility can be and is now being built into the stationary power plants of utilities and industrials, and these are the plants in which fuel application flexibility should be practiced. In the modern power plant, size as such, sulphur, iron oxide and size consist are relatively unimportant.

The B.t.u. content is the controlling factor determining relative value. For the locomotive, not only B.t.u. but all chemical, performance and physical characteristics must be considered in establishing the relative values.

Performance Troubles

The railroads are using coal from some mines no part of which should be used on road locomotives—coal which is so friable it won't stand sizing. To briquette it is uneconomical and mechanical cleaning can't be justified, but it is an excellent fuel for the pulverized-fuel plants of industrials and utilities, and it can be used in these stationary plants to good advantage. There is where it belongs.

Another example: One coal seam in which several mines are operating is now being used largely for railroad fuel in the run-of-mine size. Slack, ⅜-in. by 0 in. which is about 30 per cent of the total size consist, has an ash softening temperature of about 2,000 deg., which is 300 to 400 deg. lower than the other 70 per cent of the coal. In addition, the plus ⅜-in. coal can be substantially improved, both in quality and in ash-softening temperature by wet mechanical cleaning. At times, the 1¼-in by ⅜-in. stoker size is robbed from the mine run and the plus 1¼-in and minus ⅜-in have been reassembled as a locomotive fuel. It doesn't make sense to put this kind of slack in the firebox of a hard-working locomotive.

There are hundreds of cases in this same category where improper fuel application reduces locomotive availability. One of the photographs shows a plugged front end. This doesn't occur when using the proper locomotive fuel. Another shows a slagged flue sheet. Conditions represented here can accumulate in less than 100 miles, and there is something wrong with the quality, uniformity, or size of the locomotive fuel being burned. A third photograph shows a chunk of slag which has been pried from the rear flue sheet as it appears from the tube side. It doesn't take long for a locomotive to stop steaming with this kind of an accumulation. Steam locomotives cannot be competitive with modern Diesels when burning coals which cause troubles of this type.

Some Other Factors

Test information will crystallize the differences of opinion on what the proper coal from each mine should be for use on road locomotives. It should be observed, however, that such an agreement will be worthless unless producers refuse to ship, and railroads refuse to accept, the coals which are unsuitable for locomotive used.

High-pressure interference from other industry which forces the acceptance of unsuitable quality or size will provide only temporary benefits in traffic or shipping relief. As long as the bars are down, "cats and dogs" will never stay where they belong; but a gradual raising of the bars will in time keep the mongrels in their place—and their place certainly isn't on road locomotives.

Obviously, better engine fuels will reduce the cost, frequency and nuisance of service facilities at terminals and enroute. Better fuel will also reduce the frequency, time and cost of maintenance incidental to the use of coal. Public and railroad acceptance of coal-fired steam locomotives will be substantially better if better fuel is burned.

We are at a turning point in a century of progress with steam motive power. Patience, understanding and intelligence in the continued use of solid fuels are essential, and the failure to coordinate the supply and demand for all fuels will lead to chaos.

COMMUNICATION

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NEW YORK

TO THE EDITOR:

I want to congratulate and thank you for the fine editorials appearing in *Railway Age*. Probably due to personal interest, I particularly refer to "National Defense—Everybody's Business," and "Aiding the Air Lines by Injuring the Railroads," in the November 22 and December 13 issues. All too often one reads these fine articles, the preparation of which has required so much experience, thought and almost endless reading, without taking time out to thank the author.

W. J. TRELOAR
Asst. Manager, Mail & Express Traffic, New York Central

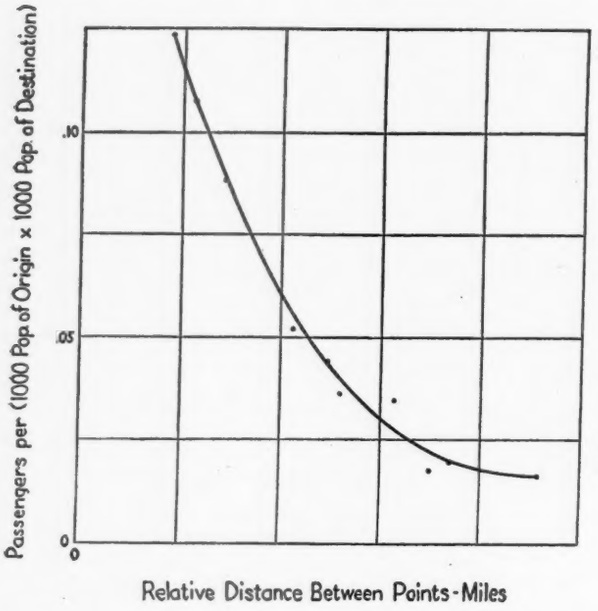


Fig. 1: Winter Month Passengers Between Selected Points, 1937

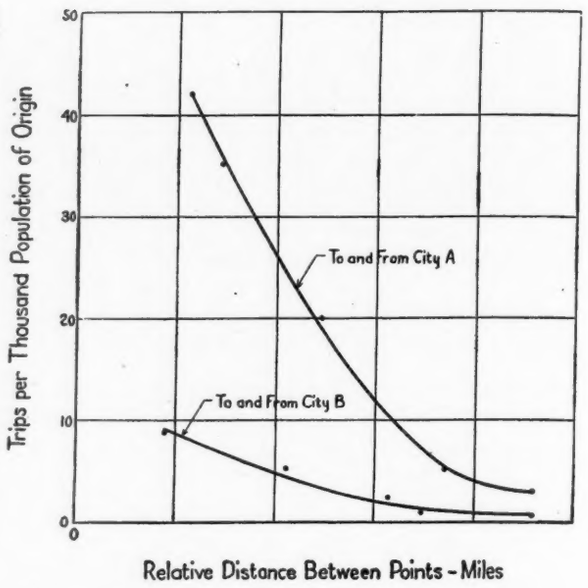


Fig. 2: Drawing Powers of Cities A and B, November, 1939

A STUDY OF ELASTICITY OF DEMAND FOR RAILROAD PASSENGER TRANSPORTATION

A graphic analysis of factors entering into a computation of traffic expectancy between selected points at varying levels of business activity, railroad fares and individual incomes

By **WILLIAM J. DIXON**

In seeking means for the attraction of passengers, it is essential that attention be given to the various factors affecting the demand for railroad passenger transportation. An evaluation of some of these factors and their relative importance formed the subject of a study made in 1940-41 at Yale University under the Committee on Transportation and presented here in abridged form. It is believed that the methods employed and findings at that time might be of interest in the light of conditions prevailing today.

The basis for the study and the manner of its development may be stated briefly.* Data relating to passenger movements, excluding interline and commutation traffic, from each to each of six cities on a major eastern railroad from January 1, 1935, to March 31, 1941, by months, were obtained from ticket sales accounts.† An analysis was then made in successive steps to determine (1) the nature of the relationship between the number of point-to-point passengers on the one hand and population and distance on the other; (2) the effect on passenger traffic of factors over which the railroads can exercise some control, such as fares, service, and equipment; and (3) the influence of other factors, particularly the level of business activity and income, on rail travel.

The period selected for the study was sufficiently long to permit observation of several fare changes and of broad variations in business activity and competitive conditions as well. The use of data for a limited number of points minimizes complications, defines passenger and revenue gains and losses, and provides a uniform set of variables with which to work.

* Another article in this issue (page 32) discusses a study of relationships of passenger-miles to the general price level, personal consumption expenditures, and revenue data, included in the current "Monthly Comment" of the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission.

† The original study also included excursion traffic, omitted here.

In a consideration of the effects of population and distance on passenger traffic density, certain characteristics of the cities used as points for comparison and of the service between them must be borne in mind. The cities in this presentation are all industrial and commercial centers, with populations ranging from less than a hundred thousand to well over a million. For convenience, they have been designated by the letters A, B, C, D, E, and F, in order of size, from largest to smallest. They are all located on one line of the railroad involved and were responsible for providing this road with a local traffic volume of over 300 million passenger-miles in 1940. Passenger train schedules on the line, which is not competitive with the line of any other railroad, are arranged to provide these cities with fast service to one another at frequent and convenient intervals.

Potential Traffic Volume

After the number of passengers between each two points had been ascertained, it was possible to determine graphically the relationship between these figures and corresponding distances and populations. A sample result is shown in Fig. 1. Here the number of winter month (January, February, March) passengers per (1,000 population of origin x 1,000 population of destination) for several representative point-to-point groupings in 1937 is plotted against distances between the points. It will be observed that the traffic volume varied directly with population and inversely with distance. The shape of the curve establishing this relationship conforms to what is known as the first hyperbolic law, for which an equation may be derived.

While it is evident from Fig. 1 that population is a governing factor in the supply of railroad passengers both to and from a community, the importance of a city as a business, manufacturing, or shopping center, as well as, say, the quality of its amusements or its proximity to resort and vacation areas, may also affect the drawing power it can exert. For large cities, this drawing power is likely to be proportional to population. In a negative sense, lack of the elements of attraction on the part of a city may be a factor in its supply of passengers to a railroad, with people traveling to other cities to accomplish certain objectives not attainable in the city in which they live. Distance enters the picture by introducing the cost element, an additional factor determining the extent of rail travel.

An opportunity to measure the relative magnitude of attraction of the various cities to each other, as affected by population and distance, was afforded by ticket sales for the month of November, 1939. In this month alone during the period of the study, the 60-day round-trip ticket, at a rate slightly below that of the regular fare, was the only type of round-trip ticket on sale (except for certain Sunday and holiday popular excursion varieties). Travelers using this type of ticket were, therefore, regular-fare passengers, whose origins were indicated by the locations at which they purchased their round trips. Fig. 2, showing the difference between the drawing powers of City A and City B, the two largest and the farthest apart, will serve as an illustration. City A, five times the size of City B, attracts approximately five times the number of passengers for corresponding distances from it.

If available, additional information on the proportion of business and pleasure travelers and on travel habits in the region would help to amplify the passenger-distance-population relationship. The only data of such a nature found pertinent to the situation in this instance were contained in a report issued by the Bureau of Labor Statistics of the United States Department of Labor in 1940.* It was shown in this report, which included some figures for Cities A and C, that family expenditures for interurban railroad transportation varied with income levels and that the proportion of

* Bureau of Labor Statistics, U. S. Dept. of Labor, "Family Expenditures in Selected Cities, 1935-36. Volume VI—Travel and Transportation". Washington, D. C., 1940.

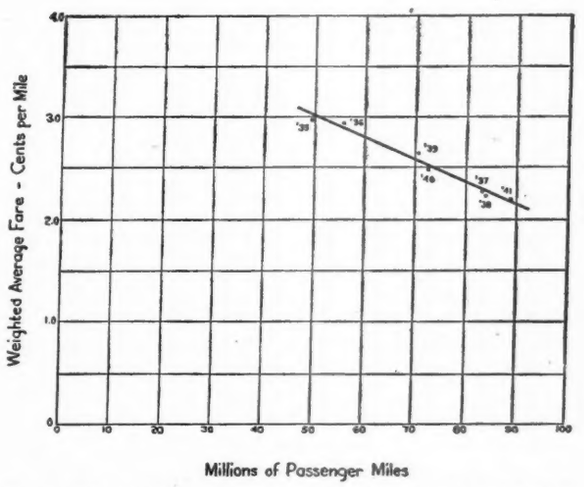
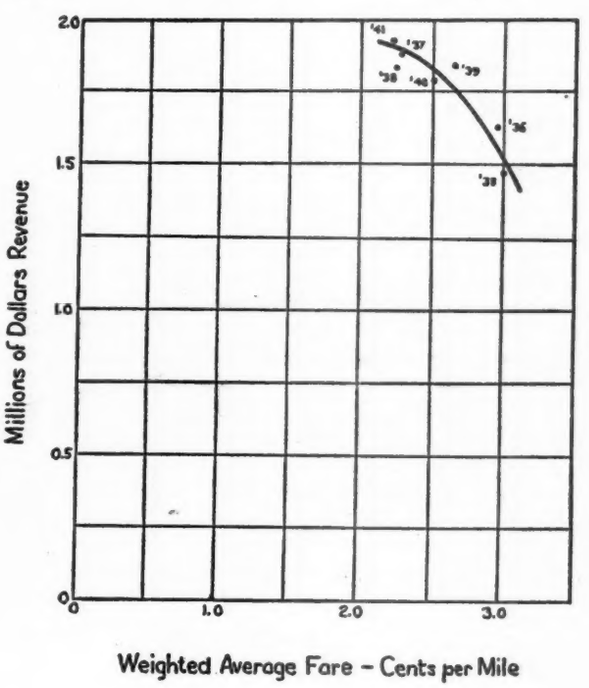


Fig. 3: Winter Month Passenger Miles, All Points, Compared to Fares

Fig. 4: Total Winter Month Revenues, All Points, Compared to Fares



income spent for railroad transportation by families in each income bracket differed from city to city. City A families, on the whole, spent more for railroad travel than City C families. This could denote City A as a greater per capita source of passengers than City C, or it could be a measure of difference in travel habits. The latter, subject to widely diverging influences—availability of alternate routes and forms of transportation, schedules, and accessibility of terminal facilities, to cite some examples—are notable chiefly for the part they play in regulating the distributing of traffic among the various carriers.

Effect of Fare Changes

The fluctuations in fare level during the period studied made possible a conclusive determination of the effect of fare changes on the demand for railroad passenger transportation and resulting revenues.

Between 1935 and 1941, basic regular fare rates in the East varied as follows:

Period	Fare—Cents per Mile	
	Coach	Pullman
1935, to May 31, 1936	3.6	3.6 plus surcharge
June 1, 1936 to July 24, 1938	2.0	3.0
July 25, 1938 to March 24, 1940	2.5	3.0
March 25, 1940 to April 1, 1941 (end of study)	2.0	3.0

There were also many other rates in effect during this period at different times, for numerous reasons, and applying between specific points for varying lengths of time.

Regular-fare passengers being of primary importance to the railroads from a revenue standpoint, development of the following relationships has been confined to this type of traffic. For the purposes of this study, regular-fare traffic was defined as all traffic handled at the basic rates listed above (except that resulting from unusual circumstances), as well as traffic moving at lower rates when the latter approximated the basic rates or the conditions governing the use of the reduced-fare tickets corresponded more or less with those under which regular-fare traffic would normally move.

In order to make comparisons when several fares are available to railroad passengers over a period of time, it is necessary to compute the various fares actually moving the traffic. The number of passengers using a given fare depends on the length of time tickets at such a fare are on sale and the period over which they are good for passage, as well as on the fare itself. Thus by proportioning all fares according to the extent of their use, the applicable fares may be calculated. For example, while the arithmetic average of the 2.0-cent coach and 3.0-cent Pullman rates in effect in 1937 was 2.5 cents per mile, the traffic actually moved at rates ranging from 2.0 to 2.36 cents a mile. The 2.0-cent rate applied between Cities A and E, where 99 per cent of the passengers use coaches, and the 2.36-cent rate applied between Cities A and B, where Pullman traffic is almost a third of the total. The fares were weighted for the overall movement on the basis of passenger-miles. Coach and Pullman passengers were treated as a whole in order to get the benefit of a maximum number of periods for comparison, since no separation of the two was possible prior to June 1, 1936.

Fig. 3 and 4 were taken from the series of graphs prepared to correlate total passenger-miles or point-to-point passengers, revenues, and weighted average fares, by years and for the winter (January, February, March) and summer (June, July, August) month periods. Here, for the winter months, as in all cases within the limits of the fares involved, the curve relating passengers or passenger-miles and fares took the shape of a straight line, and the corresponding revenue-fare curve approximated a parabola, traffic volume and revenues increasing as fares were lowered. When the highest regular-fare rates prevailed, in the winter months of 1935 and 1936, traffic, moving at weighted average fares of 2.98 and 2.95 cents per mile, and total revenues were at their lowest level in the period studied. With the new lower rates in effect in 1937 and 1938, the weighted averages being 2.27 and 2.24 cents per mile, volume jumped 57 per cent and revenues 21 per cent.

Following the increase in fares granted by the Interstate Commerce Commission in 1938, bringing the weighted averages up to 2.65 and 2.50 cents per mile in 1939 and 1940, traffic dropped proportionately and revenues fell. In 1941, with the 1937-38 basic rates restored and the weighted average fare down to 2.20 cents per mile, traffic volume again rose, this time to a new high of more than 88 million passenger-miles for the three month period, with revenues also at a maximum of $1,920,000. A decrease of half a cent a mile in the fares between these six cities, free from any other influence, therefore, may be expected to result in a traffic increase of approximately 7 million passenger-miles per month and a revenue gain in an amount determined by the price range of the fare drop.

Of course, in assessing the effect of fare changes today, recognition must be given to the current purchasing power of the dollar. Based on 1935-39 values, the appropriate fare level for production of maximum revenue has obviously increased with other rising costs. A constant fare level maintained over a period of appreciable decline in the value of the dollar is equivalent to a fare reduction. It will be noted, too, from Fig. 4, that even in the prewar period revenues at the lowest fare levels were approaching a maximum with the rate of traffic increase indicated.

The actual slope of the curve relating traffic and fares between any points is dependent on population and distance and is affected, as well, by other factors, such as competition. Among the characteristics of passenger travel indicated by the complete analysis of fares and traffic volume were a higher elasticity of demand for transportation in summer than in winter (suggesting a response of vacation traffic to lower rates) and a time lag of approximately two months after any fare change for its effect to become particularly evident.

Service and Equipment

The beneficial results of improved rolling stock and train service and their value in attracting passengers, as measured by increased patronage and revenues, and as demonstrated by the performance of various streamliners placed in operation in recent years, cannot be denied. However, the overall effect of such changes by themselves in heavily traveled areas may not be as great as is generally believed.

On the line here studied, train speeds and schedules remained essentially the same throughout the period 1935-1940. An average of 14 trains daily operated in each direction over the entire distance between Cities A and B, supplemented by additional service on various sections of the line. More than 200 modern, air-conditioned coaches and cars of other types were placed in service on most trains serving these cities during the years 1934-1938, and the through trains had such equipment regularly assigned by the end of 1935. Frequent mile-a-minute service provided by a specially built all-coach streamliner was inaugurated between Cities B and C in 1935, coincidental with a one-day, 2 cents-a-mile round-trip coach rate applicable between these points on this and other trains daily. Even with this double incentive, however, the proportionate increase in traffic between Cities B and C from 1935 to 1937 was less than that between many of the other origin-destination groupings not benefitting by a 2-cent fare until 1936 and with no special streamlined train service. Moreover, despite the fact that the trains in 1938 consisted largely of up-to-date, recently built cars, when the fares went up in that year, the traffic being handled previously at the lower fares was not retained by the new equipment. Of course, the traffic decline might have been greater had not the improved equipment been in operation, and as it is evident that service and equipment together exert an influence on passenger volume at a given fare level, they must be added to the list of factors determining the slope of the curve relating the latter.

Business Activity

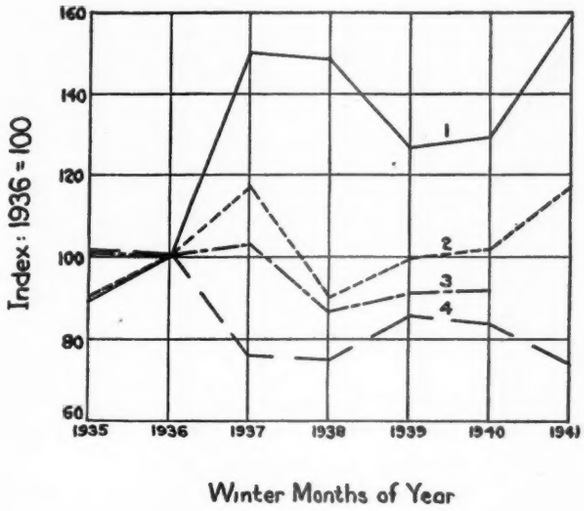
Despite the tremendous influence of fares on the demand for passenger transportation, that additional factors may also be significant is apparent when the other forces to which this business is subject are considered. Business activity, buying income, and competition are perhaps the most important of such forces. Changes in business activity, total buying income, passenger-miles, and fare levels in the winter month periods of the years 1935-41, using the value of each in 1936 as an index of 100, are shown in the time series in Fig. 5.

The method used for determining the relative importance of other factors, when suitable statistics were available, was one by which a comparison could be made between the fare-traffic relationship brought out above and the effect of the other factor on passenger volume for a comparable period.

All the points in the graphs of the type shown in Fig. 3 did not fall exactly on the curves as plotted. Therefore, the difference between the actual number of passengers indicated by the plotted points and the traffic expectancy represented by the curve must be due to other influences. These differences or deviations of the points of actual volume from the expected volume at each fare level, denoted by the curve, may be plotted against appropriate data in making comparisons with other factors.

In the examination of business activity, graphs were prepared using a horizontal line to represent the average passenger volume or passenger-miles for a constant fare level over the period of study and the vertical lines to represent the values of some accepted

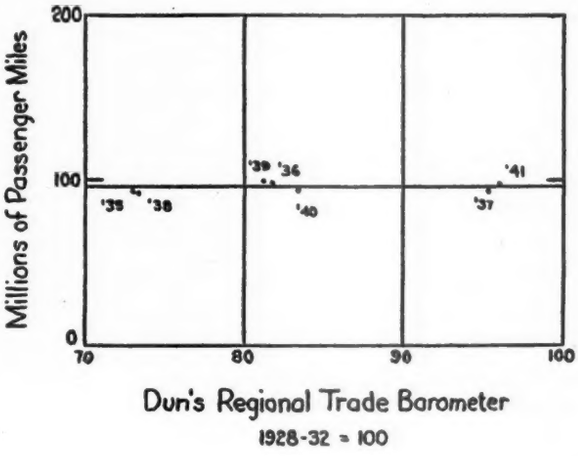
Fig. 5: Changes in (1) Passenger Miles, (2) Dun's Regional Trade Barometer, (3) Total Buying Income, and (4) Weighted Average Fares, Winter Months 1935-1941, 1936 = 100, for Six Cities



index of business activity. One such graph is shown in Fig. 6. In this case, the horizontal line is set for the number of passenger-miles which might be expected to result between all stations at a 2.0-cent fare level during the winter months, taken from Fig. 3. The actual passenger-miles for these months in the years 1935 to 1941, adjusted to a 2.0-cent fare, are plotted relative to this line, just as they fell above or below the curve in Fig. 3. The actual traffic volume at each fare was high or low, as pointed out, for some reason other than the fare level. If this reason were business activity, the deviations as plotted here against some index of this factor should by the manner in which they fall permit an average line to be drawn through them sloping upward to the right or left, thus indicating an increase or decrease in traffic with an increase or decrease in business activity.

Fig. 6 was selected as representative of the various similar graphs in the complete study, in which there was no evidence of a traffic trend related to changes in business activity, within the limits to which these oc-

Fig. 6: Winter Month Passenger Miles, Six Cities, Adjusted to 2.0 Cents per Mile Fare Level, Compared to Dun's Trade Barometer



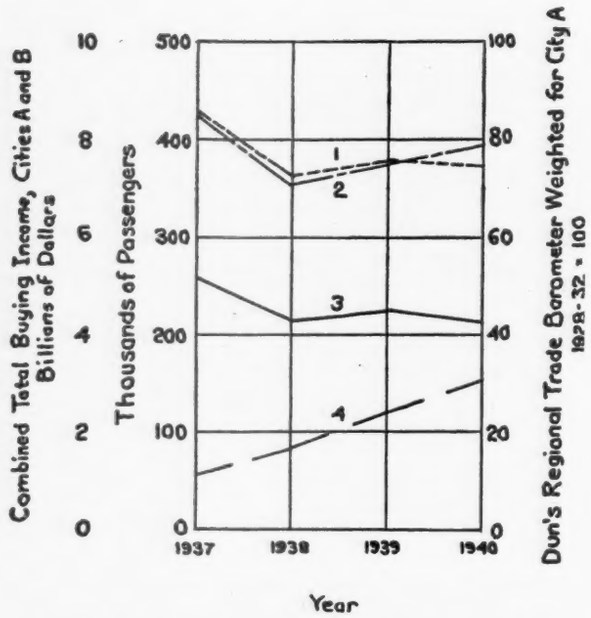
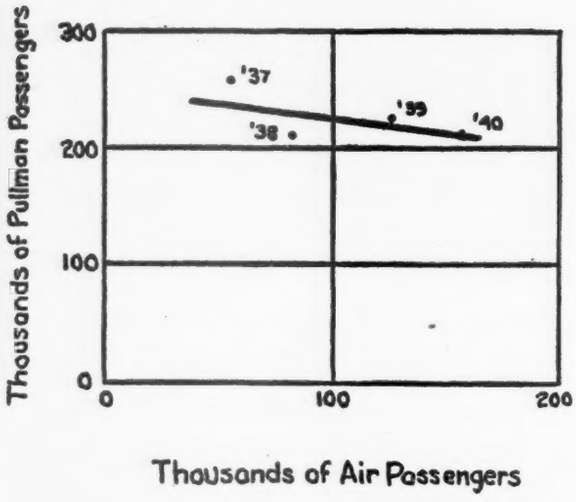


Fig. 7: Changes in (1) Buying Income, (2) Dun's Trade Barometer, (3) Pullman Passengers, and (4) Air Passengers, Cities A and B, 1937-1940

Fig. 8: Comparison of City A–City B Air and Pullman Passengers



curred in the period, for the railroad's passenger volume as a whole. This figure shows, for example, that despite an increase of more than 20 points in Dun's Regional Trade Barometer between 1935 and 1937 for the winter months, passenger-miles at a constant fare level would have been virtually the same in the two corresponding periods. It should be added, however, that traffic to and from City F in the winter months of 1941, when that city was stepping up its industrial production to new peaks, showed a marked increase over comparable periods of earlier years and over traffic for the same period to and from the other cities studied. This would indicate that a sufficiently great change in business activity will be reflected in the total volume of passenger traffic.

Comparisons may be made in the same manner between passenger traffic and available statistics of income for the period studied. Annual figures of total and family buying income in Cities A, B, C, D, E, and F charted against the number of railroad passengers in the same years, using the average annual traffic expectancy with a fare level of 2.0 cents per mile as a base, gave evidence of increased traffic with increased income only between certain points. For the line as a whole, traffic volume was not responsive to changes in income. It is possible that the apparent negligible influence of income found in this instance may have been due partly to compensating effects of other factors and partly to the proportionate distribution of increases and reductions in income among income groups.

Competition

Air and highway competition in the territory served by the railroad studied is particularly intensive, but as is likely to be the case in most areas, usable data regarding the extent of such competition were extremely limited.

Commercial planes were considered primarily as competitors for first-class rail traffic, because of comparable fares charged, so a separate comparison was made of the relationship between air and Pullman transportation. This is described later.

The number of bus passengers annually between Cities A and B in the six-year period 1935-1940, based on an estimated proportion of total bus passengers handled by the lines involved, varied inversely with the number of railroad passengers between the two points. In view of the manner in which railroad traffic varied with fare levels, this would indicate an apparent adverse effect of lower railroad fares on bus travel.

Travel by private motor vehicle between the various cities amounts to a sizeable proportion of that by rail if the volume indicated by traffic surveys conducted for brief periods on selected routes is a reliable index. Extending the figures found in the highway traffic counts, the average number of monthly automobile travelers between Cities A, D, E, and City B is ap-

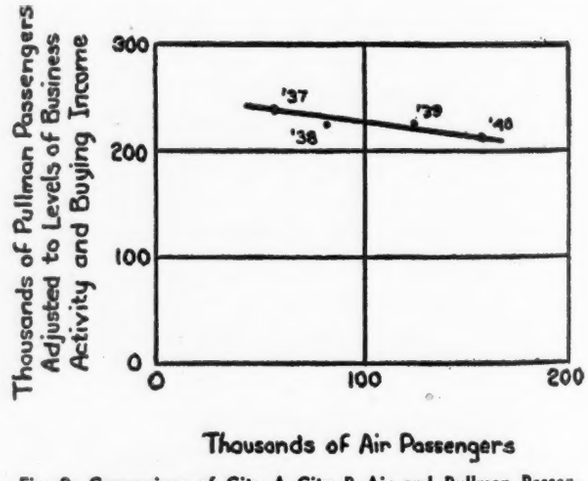


Fig. 9: Comparison of City A–City B Air and Pullman Passengers Adjusted to Levels of Business Activity and Buying Income

proximately 51 per cent of the number of monthly railroad passengers between the same points, and between Cities A, D, E, and City C, the number of motorists is roughly 55 per cent of the number of rail travelers. The effect of railroad fare changes on travel by private motor vehicle could not be ascertained, however, as information regarding the number of auto passengers by months or years in the six-year period was not obtainable. However, there is no doubt that the volume of travel by automobile is one of the principal limiting quantities affecting the demand for passenger transportation by rail.

Pullman Traffic

Fluctuations in passenger volume considered as a whole tend to reflect largely the characteristics of the predominant class of traffic, in this case coach (86 per cent). A more detailed analysis of the variations in regular-fare traffic becomes possible by making a breakdown between its coach and Pullman components. Partial results of an inquiry into Pullman traffic by itself, following such a breakdown, are set forth here.

Although the annual number of Pullman passengers could be obtained for only the four years 1937-1940, the constant Pullman fare after June 1, 1936, permitted an examination of Pullman traffic without regard to fare changes. It was found, too, that Pullman traffic volume does not appear to be directly related to coach fares or to coach passenger volume.

Eighty per cent of the Pullman traffic on the line studied is between Cities A and B, and all passenger trains making this run carry Pullman equipment. Air competition over the same route has developed steadily in recent years and statistics were available detailing its growth. Fig. 7 shows changes in City A-City B rail Pullman traffic, air traffic, business activity, and income in the years 1937-40. It will be observed that the values of each did not vary uniformly. As an initial step in the relationship of these quantities, therefore, Pullman passenger volume has been compared to air passenger volume in Fig. 8. A downward trend in Pullman traffic with increasing air traffic is evident.

By further graphical comparisons of the same sort,* relating the number of Pullman passengers at a constant volume of air traffic to business activity and this, in turn, to income, it was found, as shown by the points replotted in Fig. 9, that Pullman traffic volume, adjusted to the levels of business activity and buying income for corresponding periods, decreases with increasing air traffic in the ratio of about 3 to 10.

More specifically, a rise in Dun's Trade Barometer of 10 points over a year will result in an increase of 22,000 Pullman passengers providing the number of air passengers remains the same; with an annual increase of 25,000 air passengers, the number of Pullman passengers will drop approximately 6,000 at a constant level of business activity. Thus for every 10-point drop in the business barometer coupled with an increase of 25,000 air passengers in a year, the number of Pullman passengers between Cities A and B may be expected to decline by 28,000.

Significance of Study

The relationships found and conclusions drawn in this study have their limitations, as pointed out, but they do suggest that if fare levels, populations, and distances between points are known and if satisfactory data are obtainable or may be worked out from appropriate statistics showing business activity and income, by family income groups, with proper allowances for local conditions and unusual circumstances over a period of time, together with such further refinements as may be possible to make, the traffic expectancy between any two points or over an entire system may be estimated with reasonable accuracy on the basis of the findings and methods outlined.

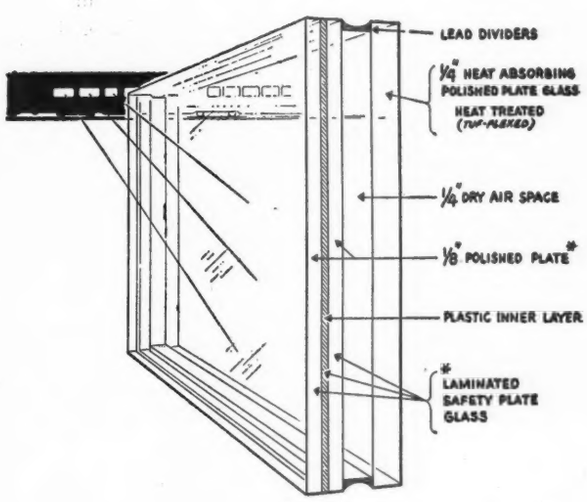
* Using the method of residuals.

DOUBLE-GLASS WINDOWS

Railroad Thermopane, a double-glass unit developed by the Libbey-Owens-Ford Glass Company Nicholas-Winslow Bldg., Toledo 3 Ohio, for passenger train windows, is composed of three panes of plate glass, the inner two of which are ⅛-in. plate laminated with plastic to form safety glass, while the outer pane is ¼-in. heat-absorbing plate. Between them is a ¼-in. space of dehydrated air, permanently sealed in by a patented metal-to-glass bond along the four edges of the glass.

An insulating unit by reason of the dehydrated air, the glass is said to increase the efficiency of heating.

The outer heat-absorbing glass helps to cut down heat rays from the sun and substantially reduces glare. This pane may also be heat-tempered for extra strength if desired. The inner surfaces of the unit are permanently cleaned at the factory, and the unit need never be dismantled; no dehydration capsules are used.


LEAD DIVIDERS
¼" HEAT ABSORBING POLISHED PLATE GLASS HEAT TREATED (TUF-FLEXED)
¼" DRY AIR SPACE
⅛" POLISHED PLATE*
PLASTIC INNER LAYER
* LAMINATED SAFETY PLATE GLASS

Composition of the double-glass construction in the special Railroad Thermopane for passenger-car windows

I. C. C. ANNUAL REPORT CALLS FOR MORE TERMINAL UNIFICATION

Asks for such economies to share with rate increases the burden of offsetting rising costs; 16 legislative recommendations are all repeaters

Railroads should now undertake to bring about "a greater degree of terminal unification" and thus make the resultant economies share, with general rate increases, the burden of offsetting the "rising spiral of costs," the Interstate Commerce Commission says in its sixty-first annual report which went to Congress on January 20. The report is in the usual form, being a 149-page document reviewing commission activities during the period from November 1, 1946, to October 31, 1947; and its 16 legislative recommendations are all repeaters from the previous report.

They include no recommendation that the commission be given additional powers to deal with the terminal-unification matter, but the report's discussion of that subject suggests that section 3(5) of the Interstate Commerce Act is not now "sufficiently broad" to cover all phases of the situation. "In the first place," it adds, "the question is not confined simply to the use of one carrier's facilities by another. It is rather a problem of unifying terminal properties of several carriers in a manner that will permit the consolidation of the properties under a common ownership, the elimination of duplications, the coordination of operations, and the adequate protection of labor."

Terminal Situation Needs Attention

The commission recalls that it had stressed the "importance of terminal unification" in previous annual reports, including those of 1918, 1919 and 1922. "Rising costs of railroad operation and delays in the movement of cars in times of serious car shortages," it continues, "have served to emphasize again the need for a greater degree of terminal unification than has been achieved up to this time. Increased operating costs in recent years have fallen with particular severity on terminal operations."

In the latter connection it is further asserted that, during the 1939-45 period, terminal costs "increased out of proportion to the increased traffic volume, even after adjustment for general changes in wage and price levels," while line-haul operating costs "increased roughly in proportion to the increased gross ton-miles of traffic handled." Reference is also made to the "exhaustive study" given the matter of terminal unification by the staff of the former coordinator of transportation—a staff "composed of men with practical experience in rail transportation collaborating with committees of railroad officials."

The study, as the commission points out, covered more than 5,000 projects; and the potential savings, as estimated by the former coordinator (the late Joseph B. Eastman) in 1935, were about $56,000,000 annually. "Undoubtedly the savings would be much greater at the present time," the commission suggests. The "principal obstacles" to proposed terminal unifications in the past are listed as "either passive or active resistance on the part of railroads having advantageous locations in terminal areas and the opposition of employees whose jobs would be affected." Another "complication" is found in the fact that terminal properties which would be abandoned are often subject to mortgages securing bonds.

High Costs Point Up Problem

These difficulties "are formidable," the commission concedes. It adds, however, that "since World War II this problem has taken on added significance because of a rising spiral of costs and the efforts of the rail carriers to solve such problems by general rate increases."

The report's 16 formal legislative recommendations repeat previous commission calls for the enactment of legislation of the Bulwinkle-bill type "so as to provide adequate regulation of two or more common carriers or freight forwarders, subject to the act, when they agree and act jointly through a bureau, conference, or association in establishing rates, fares, charges, etc., subject to the provisions of the act"; and for legislation of the expired McLaughlin-act type to set up in a new section of the act (20b) permanent provisions "permitting carriers by railroad as defined in section 20a, which are not in equity receivership or in process of reorganization under section 77 of the Bankruptcy Act, to make adjustments of their obligations without resort to judicial reorganization under section 77."

Also, the commission again recommends amendments to section 25 to give it authority to require railroads "to install and maintain telegraph, telephone, radio, inductive or other wayside or train communication systems intended to promote safety of railroad operation, and to establish and maintain rules, regulations, and practices with respect to operation of trains intended to promote safety of railroad operation." The extension to carrier associations of commission authority to require reports and inspect records is

also sought. This would give the commission that much jurisdiction over the Association of American Railroads, the American Short Line Railroad Association, and like organizations in the motor carrier, water carrier and forwarder fields.

Still Wants New Explosives Act

The proposal that section 20a, which relates to securities of carriers, be amended to make it applicable to sleeping-car companies, served to recall that such legislation was enacted last year, only to be vetoed by President Truman, who objected to other provisions designed to make less restrictive the act's prohibition against carrier officers profiting from the issuance of securities by their companies. Then there are the recommendations that the Transportation of Explosives Act be completely rewritten; that the commission be given on a permanent basis the same emergency powers with respect to motor carriers and water carriers that it now has with respect to car service of railroads; that section 5(2)(b) be amended to eliminate the requirement that a public hearing shall be held in all merger and acquisition cases "where carriers by railroad are involved"; and that section 3(2) be amended to give the commission authority to prescribe rules for the extension of credit by express companies.

Still other legislative proposals are the recommendations that Congress remove from commission jurisdiction the extension, acquisition, or operation [as well as the construction of abandonment, as already provided] of spur tracks or of electric railways which are not operated as parts of general steam railroad systems of transportation; that provisions relating to service of notice be modified to ease the commission's work in that respect; that section 411 be amended to permit a director, officer, employee or agent of a common carrier to have an interest in a freight forwarder upon authorization by the commission, and to provide for the regulation of consolidation and leasing of forwarders; that reparations provisions be added to the act for application to motor carriers, water carriers and forwarders; and that section 222 be amended to provide "a remedy by forfeiture for failure of motor carriers, brokers, etc., to keep records in accordance with regulations prescribed under part II of the act or failure to file reports prescribed thereunder."

Finally, there is the commission's perennial suggestion that Congress should amend the Standard Time Act so as fully to occupy the legislative field respecting standards of time to be observed throughout the country. Bills to carry out virtually all of the foregoing recommendations are now pending in Congress. One recommendation made in last year's report was not repeated this year, although no action has been taken on it by Congress. It suggested that section 20(6), which provides for commission access to records relating to protective or car service, be amended "so as to be applicable to records of 'persons which directly or indirectly through rental agreements with shippers or otherwise furnish cars to or for use of any carrier by railroad or express company' subject to part I."

The report gets under way with the commission's characterization of the period under review as one which the processes of postwar reconstruction made a time of "extreme difficulty for the public carriers of this country." Attempts to cope with the situation, it adds, "have increasingly brought the carriers, shippers, and the traveling public before us in a series of nation-wide and district-wide controversies of great magnitude, necessarily overlapping and requiring expedition."

The commission, so it says, "felt a heavy responsibility in dealing with the unusually numerous problems" which the carriers brought to it, and it endeavored "to plot courses of action which would best serve the public interest in both the short and long run, and would deal fairly as between the conflicting agencies of transport." The rising costs of labor and materials are listed among carrier problems, and in that connection the commission warns that plans to meet these higher costs by rate increases must consider the competition of private transportation.

"Competition from this source, . . . already substantial, can become more serious if the rates of for-hire carriers diverge too much from the costs of private transportation," the report continues. "This fact is of special import not only for carriers but also for the smaller business enterprises. Decentralization or relocation of industries, and to an extent of population, the use of substitutes, recourse to foreign markets, and diminution of tonnage or travel and revenue therefrom, are consequences when the price of transportation is forced upwards by costs to a level which the traffic will not bear. Further, there is continually stressed in proceedings before us the reflex effect of increases in transportation prices, as themselves causing further advances in wage and materials costs for the carriers, and thereby tending to a general spiraling of all prices, as well as requiring new transportation rate increases, and so on indefinitely."

The commission says that it has borne these considerations in mind "constantly," and then proceeds to report briefly on the "two urgent appeals" of the railroads for general freight-rate increases which it received in the period under review. Reference is also made to passenger-fare increases and to increases in charges of the Railway Express Agency and freight forwarders. Since the report was prepared the commission has doubled the interim freight-rate increase authorized in Ex Parte 166, and it has approved additional increases for the Express Agency.

Private Operation Must Be Preserved

Meanwhile, the report had called attention to the fact that the United States "remains the only major nation wholly dedicated to the maintenance of private enterprise in the conduct of transportation." It added: "Problems of postwar readjustment in the transportation field necessarily assume more varied and complex forms here than in countries which follow other principles and administrative practices. These perplexing problems are inherent in the preservation of the institution of private conduct of transportation, which the country cherishes as consonant with the general character of our institutions, as well as for the superior and more varied services provided."

Moreover, the United States "is not alone in experiencing rate increases in the present year," the report says. And it also points out that railroad rate increases here during World War II and the immediate postwar period have been "of smaller magnitude" than those which took place in the corresponding period marked by World War I. "Thus, in the five-year period which ended with the general rate increase of August 26, 1920," the commission adds, "class rates, for example, received a cumulative advance of 111.3 per cent in Official territory, 53.6 per cent in Southern and Intermountain territories, and 68.7 per cent in the remainder of Western territory. If the general increase now sought by the railroads [in Ex Parte 166] were to be granted in its entirety, the effect would be to make a cumulative increase over the class-rate level of 1938 amounting to 86 per cent in Official territory, 41.1 per cent in Southern, Western Trunk-Line and Southwestern territories, and 56.8 per cent in Mountain-Pacific territory."

Also, the commission thought it "significant" that in the period 1915-20 "substantial increases were made while the war itself was in progress, whereas the only general increase in class rates during the period of actual hostilities in World War II, that of 6 per cent, was suspended in May, 1943, after being in effect about 14 months." Present railroad class rates, the report continues, are approximately 46.7 per cent higher in Official territory and 20 per cent higher in Southern, Western Trunk-Line and Southwestern territories than those of 27 years ago after the general increase of 1920. And, "furthermore, the class rates at that time did not include pick-up and delivery service."

Concerned About Age of Cars

With the rate situation thus disposed of, the report goes on to express the commission's concern about "the increasing age of railroad freight cars." Figures indicating that aspect of the equipment situation are given, and references are made to the "low level of purchases" during the depression years, the "increased efficiency" which made it possible to do more work with fewer cars, and the war use which left equipment "older in terms of effective service life than its added age would indicate." According to the commission's figures, cars over 25 years of age increased from about 400,000 in 1939 to 548,000 at the close of 1946, or from 24.5 to 31.4 per cent of the total railroad ownership.

In this connection, the report charges the railroads with "falling below the full measure of their common-carrier responsibility," but the commission anticipates that the rate increases "may make it possible to correct this situation in large part, provided material for rehabilitation and new construction is made available." Use of the older equipment, the report also says, "results in higher maintenance and operating costs and less efficient adaptation of cars to shippers' needs than would be possible with newer equipment. Shippers are called upon to pay the bill caused by this over-age equipment."

Recalling that its previous report had referred to the "many strikes" and their effects during the period then under review, the commission now says that "the record this year has been materially better." It adds, however, that the previous report's observation that "'the public interest requires a careful new appraisal of the possibility of avoiding strikes in transportation without unduly trespassing on the rights of contending groups' continues, nevertheless, to reflect our judgment as to the needs of the situation."

Taxes Remain Major Problem

In a brief reference to the tax situation, the commission notes that the level of taxes remains "a major concern of the carriers." Also, it adds, "we have the somewhat anomalous situation that in order for the carriers to recoup their increased costs of wages and materials, the shippers and passengers must pay in the aggregate a very large amount from which the carriers derive no benefit, as they pass it on to the federal and state governments as increases in taxes."

The usual review of the traffic and earnings of transportation agencies shows that carriers under commission jurisdiction reported for the fiscal year ended June 30, 1947, gross revenues of $12,362,318,000, of which the railroads accounted for $8,441,801,000. Revenues of private car lines and freight forwarders are not included in the foregoing total, but the report says that private car lines making quarterly returns to the commission had revenues of $143,958,082 for the fiscal year 1947, while the forwarders reported revenues of $52,092,895.

Traffic figures covering all carriers are given for the calendar years 1946 and 1945. In the former, the railroads produced 602,185 million ton-miles or 68.13 per cent of the total (883,927 million) ton-miles reported by all carriers. The railroads' proportion of the 1945 ton-miles was 68.2 per cent. Their proportion of the total passenger-miles was down from 1945's 30.6 per cent to 18.72 per cent in 1946. Meanwhile, the private automobile's proportion was up from 58.82 per cent to 71.68 per cent.

Commission Likes Its Present Status

The commission's analysis of railroad earnings presents again the tabulation which considers employees and investors as jointly producing an income to be shared by them. The figures, covering the 12 months ended June 30, 1947, show that the railroads in that period collected gross revenues and other income totaling $8,416 million. Outlays for materials and supplies, depreciation charges, other expenses (except wages and salaries), and taxes, including payroll taxes, absorbed $3,359 million, leaving a balance of $5,057 million remaining "for employees and investors." Wages and salaries took $4,007 million, leaving for investors about $1,050 million or 20.8 per cent of the employees-and-investors' total. The commission's comment on this showing says that if payroll taxes were treated as an addition to wages and salaries, "the amounts available for employees and investors would be raised somewhat and the percentage for investors would be proportionately lower."

Nine pages of the report are devoted to a discussion of "The Commission's Place in Government." The underlying theme of this discussion appears to be an argument against the idea of changing the status of

the commission by placing it under the jurisdiction of some present cabinet officer or transferring it, along with other federal agencies concerned with transportation, to a proposed new Department of Transportation. The commission's views are summarized in one part of the discussion as follows: "In the light of the history of the regulatory statutes, the steadily increasing powers and functions of the commission, the declaration of the special national transportation policy, and the principles of law declared by the Supreme Court in an impressively long line of decisions, there can be no doubt that the independent functioning of the commission, within well-marked limits, is now recognized and accepted as an important principle of government in the field of regulation."

The status of railroad reorganization proceedings before the commission is discussed briefly, and the report then goes on to present arguments in support of the commission's recommendation calling for legislation to permit voluntary readjustments of railroad financial structures. Other sections of the report discuss the more important proceedings before the commission, including the pending freight-rate and mail-pay cases and that embodying the railroads' undertaking to make their l.c.l. rates more nearly compensatory.

The establishment on August 22, 1947, of the interim adjustment required in the No. 28300 class-rate proceeding is cited as an indication that "important progress" has been made "toward rate equalization and the removal of regional rate differences." In its earlier discussion of recent general rate increases, the commission said that a byproduct of them "has been that the bases of the rate structures in the various rate districts and regions have tended to a greater uniformity and more common level."

In its review of railway-accident statistics, the commission mentions its outstanding order requiring railroads to install block-signal systems on lines where passenger trains are operated 60 or more m.p.h. or freight trains are operated 50 or more m.p.h.; and automatic train-control or cab-signal systems on 80 m.p.h.-lines. Only 33 petitions have been filed for exemption from or modification of the order, the report states.

It goes on to review recent developments with respect to "electronics in transportation." That situation is summarized in this way: "There are 11 communication systems in service on 9 different railroads which provide wayside-to-train, end-to-end, or train-to-train communication, or a combination of these services. Systems providing communication between fixed stations and switching engines in yards and terminals are in service at 30 locations on 19 different railroads. Of the total of 41 train communication installations in service, 22 are space radio and 18 are inductive systems, and 1 installation employs space radio for end-to-end and an inductive system for wayside-to-train communication. There are also several radio systems in service in tugboat and ferry service. There are 4 communication systems on the line of 4 carriers and 18 systems in yards and terminals on 13 different carriers in progress of installation."

The remainder of the report embodies the usual separate accounts of the work of the commission's various bureaus.

MATERIALS-HANDLING SHOW

(*Continued from page 39*)

enable planners of plant layout to design their shops so that the equipment would "fit." He suggested for safety reasons that all trucks might be made to steer in the direction of the natural tendency to turn the wheel and that lifting, tilting and lowering controls be regulated so that these functions are performed in the natural manner. He also felt that interchangeable spare parts would help to speed the handling of maintenance and repairs.

Railroad Applications

C. R. Opsahl, manager of station service of the Northern Pacific, spoke on "The Railroads' Materials-Handling Problem." He emphasized that the railroads are not sleeping where materials handling is concerned, and showed charts which made clear how much the use of mechanized equipment had raised the production in pounds of freight per man per hour at two Northern Pacific stations. At one production rose from an average of 860 lb. in 1945 to 1,088 lb. in 1947, while at another freighthouse pounds of freight handled by a man in an hour rose from an average of 1,044 lb. in 1945 to 1,170 lb. in 1947. All the savings mentioned by Mr. Opsahl were made without any modification of plant structure prior to the installation of the equipment. The speaker said the N. P. did not know all the answers, but did feel that it was on the right track. So convinced of it is the management of that road that "We have one entirely new plant completed, two nearing completion and two being remodeled which will enhance the value of mechanical equipment already in service."

J. L. Webb, manager of stations and motor service of the Pennsylvania, discussed "Loss and Damage Prevention Through Improved Materials Handling." He considered the subject important not only from an economic point of view but also from the public relations angle. The way to reduce claims, he said, is to *reduce rehandling*. He added that no one was more enthusiastic than he about the possibilities of reducing loss and damage through the use of mechanized equipment in handling freight, and that his optimism grew out of his experience, particularly during the war. He said that with one particular type of platform truck the P. R. R. has cut in half the time for handling of freight on platforms; thus one freight handler is saved for each truck installed.

Mr. Webb explained how the Pennsylvania selected equipment. Briefly, the item is tested and if found successful is included on an approved list which is sent to all officers who have anything to do with materials handling. These persons then select from this list any piece of equipment they think will improve their particular operation. The Pennsylvania prefers that local supervision should request the tools with which it works, "first, because it leaves the job of selling with the manufacturers and, second, because when local supervision selects the equipment, it carries with it a responsibility to make it work."

[The addresses of Mr. Opsahl and Mr. Webb will be reported in more detail in later issues.—EDITOR.]

GENERAL NEWS

Fiscal 1947 Reviewed by Bureau of Safety

Finds adverse weather conditions again affected hours-of-service

The annual report of Director S. N. Mills of the Interstate Commerce Commission's Bureau of Safety for the fiscal year ended June 30, 1947, is a 33-page document, which sets forth in the usual form the results of inspection of safety-appliance equipment on railroads together with information on hours-of-service records of employees, installation of signaling facilities, investigations of accidents and other activities of the bureau.

During the year under review, 1,061,699 freight cars, 24,767 passenger-train cars and 12,795 locomotives were inspected, as compared with the inspection of 1,203,408 freight cars, 27,840 passenger-train cars and 14,580 locomotives in fiscal 1946. Of the 1947 total, 3.4 per cent of the freight cars, 3.7 per cent of the passenger-train cars and 5.3 per cent of the locomotives were found to be defective, as compared to the respective 1946 figures of 3.2 per cent, 4 per cent and 5.4 per cent.

Air Brake Condition—Air brakes checked on 2,568 trains (consisting of 107,327 cars) prepared for departure from terminals were found operative on 107,182 cars, or 99.9 per cent. This percentage was attained, however, only after 1,773 cars having defective brakes had been set out, and repairs had been made to the brakes on 1,384 cars remaining in the trains. "These trains," the report observes, "had been prepared for departure, yet when afterward tested by our inspectors, it was necessary to set out or repair the brakes on an average of 1.2 cars per train." Similar tests on 1,450 trains arriving at terminals with 74,307 cars showed that the air brakes were operative on 97.9 per cent of the cars, and that an average of approximately one car per train was not controlled by power brakes.

"The annual reports of the past several years mentioned use by certain carriers of devices designed to make lock blocks of tight-lock couplers inoperative, to compensate for defects in the coupler which were productive of undesired separation of trains," the report continued. "Considerable progress has been made by the various carriers during the year in replacing those defective couplers with couplers of a modified design which are intended to avoid accidental separation."

According to the report, 685 reporting railroads and private car lines which collectively own 2,135,301 freight cars, have equipped a total of 1,488,859 such cars with power brakes of specifications complying with those set out in the commission's September 21, 1945, order which requires the installation of such brakes by January 1, 1949, on all cars used in freight service, except those equipped with passenger-car brakes. The breakdown of the figures shows that 72.9 per cent of the railroad-owned cars were equipped as of last June 30, but only 48.1 per cent of the cars owned by private car lines.

"Tests of geared hand brakes conducted by the Association of American Railroads during the fiscal year resulted in the certification of two additional horizontal-wheel brakes," the report continued. "Up to June 30, 1947, 12 vertical-wheeled geared brakes and 6 horizontal-wheel geared brakes had been certified by that association. The operation of the load-compensating brake has been demonstrated in the laboratory of the manufacturer, and the Association of American Railroads has aproved the application of the 'AB' load-compensating brake to 1,500 cars in interchange service for experimental road-service tests similar to the tests heretofore made of the experimental 'AB' brake cars."

Hours-of-Service Data—During the fiscal year 1947, 217 of the 693 railroads filing hours-of-service reports reported a total of 33,810 instances of all classes of excess service by employees, a decrease of 36,545 instances, as compared with the previous year. The fiscal 1947 figure included 4,748 instances of excess service by train-service employees subject to the 16-hour provision of the law, and 29,062 instances of excess service by operators and other employees subject to the 9-hour and 13-hour provisions of the law.

Landslides, high water, fire, adverse weather conditions, wrecking and relief service and collisions and derailments were the principal reasons for 4,325 instances (as compared to 5,252 instances in 1946 and 60,701 instances in 1945) which caused train-service employees to remain on duty longer than 16 consecutive hours during 1947. Sickness, death and personal injury accounted for 24,082 of the 29,062 instances of excess service by operators and dispatchers. The latter figure compares to 64,462 instances reported for fiscal 1946.

As of January 1, 1947, there were 104,724.8 miles of road (137,714.6 miles of track) equipped with block signals, including automatic block signals on 71,588.4 miles of road (103,167 miles of track). On the same date, there were 4,477 interlockings in operation, and 10,662.8 miles of road (20,726.5 miles of track) equipped with automatic train-stop, train-control or cab-signal devices.

BASKET WANDERS THE RAILS IN "MARCH OF DIMES" CAMPAIGN—

A "hobo" basket, started on a 10,000-mi., coast-to-coast journey by a group of Southern employees in Birmingham, Ala., is being carried from city to city by railroad crews to aid the "March of Dimes" campaign. After making his contribution, Clark Hungerford (right), president of the St. Louis-San Francisco, hands the money-laden basket to Glenn Tracy, switchman in St. Louis, Mo., to start it on the trip to Springfield, Mo., and Kansas City.

Accident Investigations—Of the 74 collisions investigated by the bureau in fiscal 1947, 44 occurred in block-signal territories and 19 on lines where the timetable and train-order system is used. The collisions resulted in the deaths of 132 persons and injuries to 1,841. Failure to control speed in accordance with signal indications and failure to obey train orders were the principal causes for the collisions. The bureau also investigated 40 derailments which resulted in the deaths of 82 persons and injuries to 1,143.

Other data in the report disclose that (1) 6 of the year's accident reports recommended the installation of "adequate" block signal systems; (2) during the calendar year 1946, there were 4,001 accidents at highway grade crossings, resulting in the death of 1,851 persons and the injury of 4,397; (3) there were 60 derailments as the result of

collisions between trains and automobiles, resulting in the death of 28 persons and the injury of 79; and (4) of the total casualties resulting from derailments and train accidents at grade crossings, 10 persons killed and 58 injured were railroad passengers, employees or persons carried under contract.

The bureau also reported that alleged violations of safety appliance laws in 114 cases, comprising 466 counts, were transmitted to federal attorneys during the fiscal year, as well as 8 cases, comprising 25 counts, alleging violation of the hours-of-service law.

N.R.A.A. Plans Record Exhibition in March

88 companies already signed up for event at amphitheater

Shocked and set back temporarily by the death on December 24, 1947, of its secretary, Charles H. White, the National Railway Appliances Association is, however, progressing its plans actively for its March exhibit at Chicago, which promises to be one of the largest in its history. The exhibit, to be held March 15-18, in conjunction with the Annual Meeting of the American Railway Engineering Association, will occupy the spacious quarters of the International Amphitheater on Chicago's southwest side, to and from which free bus transportation will be provided on a 10-min. schedule for those attending the A. R. E. A. meeting at the Palmer House.

Plans for the exhibit, which will feature equipment, materials and devices used in the construction and maintenance of railway tracks, bridges, buildings and water service facilities, are being directed by C. L. Mellor (Barco Manufacturing Company), as president of the N. R. A. A., and R. B. Fisher (Buda Company), who, at a recent meeting of the board of directors was elected secretary of the association to fill the unexpired term of the late Mr. White. Mr. Fisher was also appointed director of exhibits and chairman of the association's Exhibit committee. New officers of the association have been established at 1 N. LaSalle st., Chicago.

To date, 88 companies have arranged to be represented in the exhibit. A list of these companies follows:

Exhibitors

Achuff Railway Supply Company, St. Louis, Mo.
Air Reduction Sales Company, New York
Allied Chemical & Dye Corp., New York
American Fork & Hoe Co., Cleveland, Ohio
American Hoist & Derrick Co., St. Paul, Minn.
Armco Drainage & Metal Products, Inc., Middletown, Ohio
Austin-Western Company, Aurora, Ill.
Barco Manufacturing Company, Chicago
Bernuth, Lembcke Company, Inc., New York
Buda Company, Harvey, Ill.
Caterpillar Tractor Company, Peoria, Ill.
Chicago Pneumatic Tool Company, Chicago
Chipman Chemical Company, Inc., Chicago
Crerar, Adams & Company, Chicago
Cullen-Friestedt Company, Chicago
Dearborn Chemical Company, Chicago
Henry Disston & Sons, Inc., Philadelphia, Pa.
Duff-Norton Manufacturing Company, Pittsburgh, Pa.
Eaton Manufacturing Company, Massillon, Ohio
Electric Tamper & Equipment Co., Ludington, Mich.
Eutectic Welding Alloys Corporation, New York
Fabreeka Products Company, Boston, Mass.
Fairbanks, Morse & Co., Chicago
Fairmont Railway Motors, Inc., Fairmont, Minn.
Harnischfeger Corporation, Milwaukee, Wis.
Hayes Track Appliance Company, Richmond, Ind.
Hubbard and Company, Pittsburgh, Pa.
Independent Pneumatic Tool Company, Chicago
Industrial Brownhoist Corporation, Chicago
Ingersoll-Rand Company, New York
Insley Manufacturing Corporation, Indianapolis, Ind.
International Harvester Company, Chicago
Johns-Manville Sales Corporation, New York
O. F. Jordan Company, East Chicago, Ind.
Joyce-Cridland Company, Dayton, Ohio
Kalamazoo Manufacturing Company, Kalamazoo, Mich.
Kershaw Company, Montgomery, Ala.
Koehring Company, Milwaukee, Wis.
Lehon Company, Chicago
LeRoi Company, Milwaukee, Wis.
Littleford Bros., Inc., Cincinnati, Ohio
Maintenance Equipment Company, Chicago
Mall Tool Company, Chicago
Master Builders Company, Cleveland, Ohio
Mid-West Forging & Manufacturing Co., Chicago
Modern Railroads, Chicago
Monroe Railway Appliance Company, Tuscola, Ill.
Morden Frog & Crossing Works, Chicago
Morrison Railway Supply Corporation, Buffalo, N. Y.
Murdock Manufacturing & Supply Co., Cincinnati, Ohio
National Aluminate Corporation, Chicago
National Lock Washer Company, Newark, N. J.
Nichols Engineering Company, Chicago
Nordberg Manufacturing Company, Milwaukee, Wis.
Oxweld Railroad Service Company, New York
P. & M. Co., Chicago
Pettibone Mulliken Corporation, Chicago
Philadelphia Steel & Wire Corp., Philadelphia, Pa.
Pittsburgh Pipe Cleaner Company, Chicago
Pocket List of Railroad Officials, New York
Punch-Lok Company, Chicago
Racine Tool & Machine Co., Racine, Wis.
Rail Joint Company, New York
Rails Company, New Haven, Conn.
Railroad Accessories Corporation, New York
Railroad Products Company, Cincinnati, Ohio
Railway Age, Chicago
Railway Maintenance Corporation, Pittsburgh,
Railway Maintenance Devices Company, Morton Grove, Ill.
Railway Purchases and Stores, Chicago
Railway Track-Work Company, Philadelphia, Pa.
Ramapo Ajax Division, American Brake Shoe Company, Chicago
Reade Manufacturing Company, Chicago
Ric-Wil Company, Cleveland, Ohio
Rust-Oleum Corporation, Evanston, Ill.
Schramm, Inc., West Chester, Pa.
Sperry Products, Inc., Hoboken, N. J.
Taylor-Colquitt Company, Spartanburg, S. C.
Teleweld, Inc., Chicago
Templeton, Kenly & Co., Chicago
Thornley Railway Machine Company, Joliet, Ill.
Timber Engineering Company, Washington, D. C.
Union Metal Manufacturing Company, Canton, Ohio
United States Steel Corporation, Pittsburgh, Pa.
Warner & Swasey Co., Cleveland, Ohio
Western Railroad Supply Company, Chicago
Woodings-Verona Tool Works, Verona, Pa.
Woolery Machine Company, Minneapolis, Minn.

New $3,000,000 Freight Terminal Completed by B. & O. Near Chicago

The Baltimore & Ohio has completed work on its new freight terminal at Barr yard, near Riverdale, Ill., in the metropolitan area south of Chicago, at a cost of more than $3,000,000. Construction of the new freight yard and its many auxiliary facilities—designed to expedite the handling of freight moving through Chicago — was begun in 1945, and comprises 50 mi. of tracks, an engine terminal and engine servicing facilities, a car repair yard, an equipment conditioning yard, a Diesel fueling station and a number of additional buildings.

The Barr Yard terminal—part of the $116,500,000 postwar improvement program completed thus far by the B. & O. —has a total of 39 tracks in its westbound and eastbound freight classification yards, in addition to trackage in the receiving yards. Covering an area of 205 acres in a central location, it will serve as the main freight terminal of the B. & O. in Chicago, handling the switching and classification of all of the road's freight passing through the Chicago district. It will also serve as freight classification and dispatch point for the B. & O. Chicago Terminal.

The yard is floodlighted for night operations and is equipped with a two-way public address system which permits instantaneous communication between yard, train and engine crews and the yardmasters' towers. Operators can call orders to the yardmen, who reply by calling toward loudspeakers located throughout the yard. New interlocking and signaling facilities, governing train movements between the main line and the yard, have been installed to expedite and increase the safety of operations.

Among the new structures at Barr yard are an office building and a rest house provided with a cafeteria for the convenience of freight train road crews. The new engine terminal includes an enginehouse, a 115-ft. turntable, a coaling station, sand and ash-handling facilities and a water station. A track scale with a capacity of 200 tons is provided for the weighing of freight cars.

Reed Group Submits Freight Car Report

Senate subcommittee finds supply too low, raps commission inaction

The existence of an inadequate overall freight car supply, including box cars, and failure by the Interstate Commerce Commission to exercise its "full powers" in the matter of equitable distribution of cars as between railroads and sections of the country, are among the findings contained in a report which has been made public by a subcommittee of the Senate committee on interstate and foreign commerce.

The subcommittee's findings, the result of an investigation of the freight car situation launched early last year under Senate Resolution 47, also indicate that the War Production Board and the Civilian Production Administra-

tion, failed to make sufficient allocations of steel for freight car construction. Another major finding was that the building of freight cars for export in 1946 did not operate to the detriment of business in this country. The five-man subcommittee was headed by Senator Clyde M. Reed, Republican of Kansas.

In a foreword to its 23-page report, entitled "The Story of the Box Cars," the subcommittee considers as the major accomplishment of its probe the top priority given by the government, press, and business to the need for "more steel for more freight cars." At the same time, it observed that, although for 20 years up to 1943 railroad transportation had been so adequate and efficient that its continuance came to be generally taken for granted, the "margin of error in that assumption came near to disaster and is not completely averted even now."

The report estimated that railroads and private car lines owned approximately 1,997,245 freight cars, including 724,314 box cars, as of December 31, 1947, although the subcommittee said that "opinion was universal, including the railroads, that the overall supply of box cars for all roads should be 825,000."

Impossible Task—In its discussion of car distribution, the subcommittee concluded that the equitable distribution of an adequate national car supply is almost a super-human task. Noting that such a problem confronted the Car Service Division of the Association of American Railroads throughout the war and is still confronting it, the report asserted that "there is no complete relief until freight car equipment has been increased through building of new cars to a point where it meets the needs of the commerce of the country."

The subcommittee contended that it is obvious that, unless there is a constant flow of empty freight cars westward out of the unloading territory into the loading territory, the latter's car supply would be depleted and eventually completely exhausted. "The volume of the empty freight car movement westward necessary to correct the imbalance between the loading and unloading territories has never been definitely determined," it said, adding that western shippers generally agree that such a movement should total 1,200 cars daily, particularly through the harvest months from July to November, as compared with 900 cars suggested by the A.A.R.'s C.S.D. chairman, W. C. Kendall.

Noting that Senate Resolution 47 had its genesis in a resolution adopted by a conference of the grain and milling trade in November, 1946, the subcommittee reported that a "vital fact" which most of the public in the East does not understand is that a "loading territory" is bound to be the first victim in the maladjustment of an inadequate car supply. At the same time, it denied the "easy and common assumption" that the increased movement of empty cars westward was a "favor" to the Grain Belt territory brought about by activity of grain and flour shippers through pressure put upon the railroads and other means of freight car control. In this connection, the subcommittee referred to the large number of blocked wheat and grain elevators; and it charged that eastern roads were disregarding box car orders issued by the A.A.R.'s C.S.D. calling for the return of empty cars westward. It also referred to the order of President Truman that priority must be given the export grain program, and noted that complaints with respect to the freight car shortage were being made by shippers from all parts of the country.

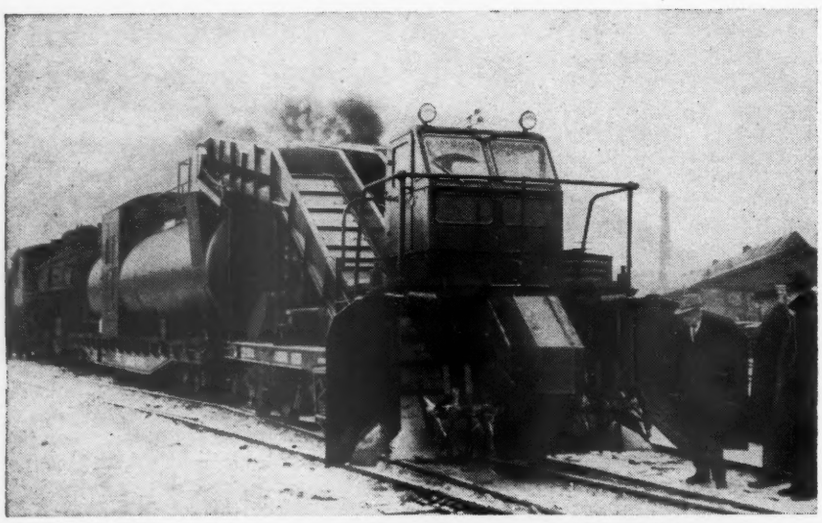
Long-Range Program—With respect to the freight car building program, the subcommittee, observing that little consideration was given during 1946 to transportation facilities required for peacetime purposes, concluded that the vital needs of the country call for a program resulting in the production of not less than 10,000 new cars monthly. "This program should be continued for at least 24 months from the time it reaches the 10,000 goal," it said, adding that "if business conditions continue on anything like the present level through 1948, 1949 and 1950, the 10,000-car program should be continued for an additional 12-month period."

At the same time, the subcommittee reported that (1) the construction of new cars ranged from a low of 2,293 in February, 1947, to a high of 9,803 in December; and (2) 100,000 new open-top cars should be installed, with a corresponding number of new cars to replace open-top cars now in service as they are retired. It also lauded the "continuous and vigorous" efforts of Colonel J. Monroe Johnson, director of the Office of Defense Transportation, to increase the car supply, and praised the combined cooperation of the steel companies, car builders, railroads and others to clear up certain allocation "misunderstandings" in order to meet the proposed 10,000-car monthly program. "We confidently anticipate that 1948 will show building of new freight cars at a rate exceeding 10,000 monthly," it said. "It will require production at this rate for from 24 to 36 months to relieve the existing emergency."

The subcommittee also declared that the I.C.C. should keep itself informed through the A.A.R.'s C.S.D. and take cognizance of box car dislocations during the harvest period. "It seems to the subcommittee" it said, "that the commission is fairly entitled to criticism for its failure to do so and to that extent has not discharged the obligation imposed upon it by the Interstate Commerce Act." Also criticized was the commission's "Division of Service."

No Formula Found — The Senate group said that it is unaware of any definite formula by which it can be exactly determined whether any railroad has furnished its fair share of cars for the general supply, although it added that statements issued by the A.A.R.s C.S.D. provide a "rough test" of whether the distribution of the freight car equipment is on a prima facie equitable basis.

Pointing out that only orders issued by the commission calling for the relocation of empty box cars are subject to penalties, the subcommittee said that the commission, when it enters into situations such as those complained of by the grain belt, designates an agent (usually Mr. Kendall) through which it issues orders to the railroads. "There has been some criticism from shippers of the designation of a railroad association official through whom to issue orders to railroads who are members



NEW 100-TON SNOW MELTER FOR CANADIAN NATIONAL—This large snow melter —said to be the first of its kind to reach Canada—has been delivered to the Canadian National at Montreal, Que., having been specifically designed for use in the terminal area. The pronged teeth of the two spirals at the front of the machine whip snow from the track to conveyor belts which carry it to the 16,000-gal. melting tank at the rear. The latter will melt a quantity equivalent to what can be carried on 32 fully loaded flat cars.

of his association," the report stated. "The subcommittee does not think this criticism has much weight. Mr. Kendall is known to be a competent man familiar with car service matters in the entire country. The committee thinks he performs his duties conscientiously."

Asserting that there is prima facie reason for a belief that several large and important railroads are very much below their ownership in certain types of cars, the subcommittee recommended that the commission ascertain whether such railroads have taken, or are taking, steps to provide themselves with an adequate supply of cars. In particular, it urged a commission-sponsored inquiry into the box car ownership of the New York, New Haven & Hartford, Southern Pacific, Boston & Maine, Erie, Delaware & Hudson and Lehigh Valley. "The subcommittee thinks the commission staff could give attention to these matters without involving too much time or effort," it said, adding that it is of the opinion that placement of orders by the New Haven, for example, for purchases of new box cars equivalent to 66 per cent of its present ownership is admission that its present supply is deficient. "Such action would be helpful in overcoming the present inadequacy of the total freight car supply. No additional legislation for this purpose is necessary."

Foreign Car Orders—With respect to the export of new freight cars, Senator Reed's group said it was inclined to the view that the cars built for export through 1946 and the first half of 1947 did not delay construction of cars for domestic use. Referring to testimony to the effect that 18,020 cars were produced for foreign interests in 1946, and that such cars are only about one-third the size of domestic cars and require about half as much material, the subcommittee said that the bulk of those cars were built during a period when car orders from American railroads were at a low level. "There is ground for acceptance of the view," it went on, "that the building of these cars for export helped to keep car building shops in operation when they might otherwise have been closed down."

The subcommittee also reported that the latter part of 1947 showed an improvement in efficiency with regard to the handling of freight cars. "Monthly reports of the car service division show a decreasing turn-around time for freight cars," it said. "This is the factor directly affected by efficiency in railroad operation. The committee does not feel that this phase calls for any further attention on its part at this time."

The investigating group also held that per diem charges are a "very important phase" of the freight car situation. At the same time, it said it is of the opinion that the commission presently has the power, under the Interstate Commerce Act, to fix reasonable per diem charges under varying conditions on an adequate record before it. It expects the commission, it said, to exercise the powers which Congress has given it.

Although it did not suggest any per diem rate because "there is no information in the record which would justify it doing so," the subcommittee said it hopes that a full and complete record will be made before the commission and that action taken by that agency will "tend to solve the problem by rewarding railroads having a proper proportion of ownership of the general car supply and penalizing railroads that have failed to so provide themselves."

The subcommittee also pointed out that it has not undertaken to investigate the feasibility of a central freight car pool with central ownership in lieu of individual railroad ownership of present. Conceding that the formation of a pool would require additional legislation, it suggested that such a proposed plan be "allowed to lie" until termination of the two pending per diem complaints before the commission. The result of these proceedings (see *Railway Age* of January 17, page 54), it said, may produce some clarification of the freight car ownership problem.

In an accompanying report of Senate Resolution 44, pertaining to its investigation with respect to the adequacy of coal car supply in West Virginia mining areas, the subcommittee concluded that, in view of the fact that the B. & O., against which road most complaints were directed, received 7,370 new hopper cars in 1947 in addition to receiving assistance from the A.A.R., O.D.T. and other roads, there will be no "further serious trouble" on that road.

A. A. R. Mechanical Division To Meet in June

Announcement has been made that the next annual meeting of the Mechanical Division of the A. A. R. will be held at the Congress Hotel, Chicago, June 28, 29 and 30. This is a business session of the division and it is not planned to hold any exhibition of railway equipment and supplies.

Pension Hike, Lower Retirement Age Aim of Anti-Crosser Group

The National Railroad Pension Forum, Inc.—an organization of "rank and file" railroad employees organized at Chicago last year to seek repeal of the so-called Crosser Act . . . announced this week that its president has departed for Washington to solicit congressional action on its demands that:

(1) The amount of pensions be increased by 33⅓ per cent because of the rise in living costs, and

(2) The retirement age of male railroad workers be made 60 years instead of the present 65 years.

Thomas Stack, the forum's president, said its members are opposed to the "high tax rate rail employees have to pay" under the Crosser amendments to the Railroad Retirement Act. Employees covered by social security pay a maximum tax of $30 per year, he pointed out, whereas rail workers pay $207 per year but "do not receive seven times more benefits."

Emphasizing the need for a lower retirement age, Mr. Stack stated: "According to the U. S. Census Bureau figures, 92 out of every 100 persons do not live to see their 65th birthday. Seventy-five per cent of the nation's rail workers die before reaching age 65." Mr. Stack said the forum is now working on a bill embodying its stand on the Crosser amendments and "we hope that a congressman or senator from Illinois will sponsor our bill, since Illinois is the nation's rail center."

Formerly known as the "Railroad Employees Pension Protective Committee—Chicago Area," the Pension Forum recently became national in scope, with regional vice-presidents located in Baltimore, Md., San Francisco, Cal., Knoxville, Tenn., Minneapolis, Minn., and Dallas, Tex. It is incorporated under the laws of the state of Illinois.

Railroads, Private Car Lines Got 68,507 New Freight Cars in 1947

The nation's railroads and private car lines received 68,507 new freight cars in 1947, an increase of 26,552 over 1946, the Association of American Railroads has announced. Of the total number, Class I roads and railroad-owned private-controlled refrigerator companies put 63,312 in service in 1947, as compared to 40,377 in 1946, and the greatest number for any year since 1941, when 80,502 were installed. Freight cars retired in 1947 total 71,331, compared with 61,004 in the preceding year.

New freight cars installed in 1947 by Class I roads and railroad-owned private-controlled refrigerator car companies, included 31,127 box cars, of which 27,194 were plain and ventilated cars and 3,933 automobile box cars; 20,138 hopper cars, including 1,509 covered hoppers; 3,269 gondolas, 996 flat, 6,931 refrigerator, 500 stock and 351 miscellaneous freight cars. New freight cars installed by those carriers in December, 1947, totaled 9,006, of which 7,513 were built by industrial carbuilders and 1,493 in railroad shops. New freight cars installed last month exceeded the number of freight cars retired by 3,263 cars.

The Class I roads also put 843 new locomotives in service in 1947, of which 72 were steam, two electric and 769 Diesel-electric. New locomotives installed in 1946 totaled 563, of which 83 were steam and 480 were Diesel-electric.

All railroads and private carlines had 119,786 new freight cars on order on January 1, compared with 125,395 on December 1, 1947 and 68,667 on January 1, 1947. Of the total number, Class I roads and railroad-owned private-controlled refrigerator companies had 105,112 on order on January 1, compared with 63,829 on January 1, 1947, and 110,822 on December 1, 1947. New freight cars on order by Class I roads and railroad-owned private-controlled

refrigerator companies on January 1, 1948, were as follows: 39,055 box cars, including 37,448 plain and ventilated and 1,607 automobile; 44,315 hopper cars, including 3,820 covered hoppers; 13,548 gondolas, 865 flat, 5,896 refrigerator, 850 stock and 583 miscellaneous freight cars.

The Class I railroads also had 1,226 locomotives on order on January 1, of which 30 were steam, four electric and 1,192 Diesel-electric. This was the greatest number on order since October, 1923, when the total was 1,242. Locomotives on order on January 1, 1947, totaled 604, of which 64 were steam, six electric and 534 Diesel-electric.

Op Unions Reject Arbitration As Mediation Efforts Fail

On January 15, the National Mediation Board, meeting at Chicago in an effort to bring the Brotherhood of Locomotive Engineers, Brotherhood of Locomotive Firemen & Enginemen, the Switchmen's Union of North America and the nation's railroads to agreement in the current wage and rules dispute, advised the parties to the dispute that its best efforts had failed to bring about any settlement. The board then urged that the disputants agree to submit their controversy to arbitration. In accord with the spirit of the Railway Labor Act, the railroads, through the three regional conference committees, promptly agreed to submit the dispute to arbitration. The three "hold-out" brotherhoods, however, declined the offer for arbitration and (after some confusion in public statements) set February 1 at 6 a. m. as the date and hour for withdrawal from service of the 125,000 employees whom they represent. Had the unions gone along with the carriers, an arbitration board would have been chosen to hear the case, and their decision would have been final and binding on all parties to the dispute.

If the President now creates an emergency "fact-finding" board prior to the effective date of the strike, no actual work stoppage can take place for a period of 60 days—30 days during which the emergency board functions, and an additional 30 days thereafter allowed for consideration of the recommendations of the board. The recommendation of the emergency fact-finding board is not mandatory, however.

The three brotherhoods which have failed to reach an agreement in negotiation with the carriers, or through the conciliatory efforts of the National Mediation Board, and have declined to submit their case to arbitration, are seeking a 30 per cent pay increase with a minimum increase of $3 a day, together with a number of costly changes in working rules. Two other operating unions—the Brotherhood of Railroad Trainmen and the Order of Railway Conductors—settled a similar dispute on November 14, 1947, by accepting a wage increase of $1.24 a day and a settlement on certain rule demands. At the same time, an identical settlement was proffered to the engineers, firemen, and switchmen, but rejected as "wholly unsatisfactory." Earlier, on September 2, nearly a million non-operating employees were awarded a 15½-cent hourly pay increase by an arbitration board.

1939 Divisions Order on Florida Vegetables Vacated by I. C. C.

Acting upon a petition filed by carriers in official and southern territories, the Interstate Commerce Commission has vacated, effective February 15, its order of July 25, 1939, in the Docket No. 24160 proceeding insofar as it relates to divisions of joint rates on vegetables from Florida to Official territory. The petitioners said they will seek commission approval of a new agreement calling for the application of divisions on Florida vegetable rates different from those stipulated in the 1939 order.

P. S. C. Hears About Long Island Operations During Recent Storm

The Long Island ran only 342 of 605 electric trains scheduled for December 26, 1947, the day of the record-breaking 26-in. snowfall in the New York area, Fred B. White, head of the state Public Service Commission's railroad bureau, testified in New York on January 20, the second day of the commission's hearing into the road's activities during the storm. Of the 342 trains operated, 116 ran late, Mr. White told George A. Arkwright, the presiding commissioner. The day after the storm only 2 of 522 "scheduled electric trains" were operated and both were late, according to his statements, but Louis J. Carruthers, the Long Island's attorney, pointed out that these figures disregarded the fact the road had operated many unscheduled shuttle trains on both days.

Mr. White further testified that of eight flanger-chloride trains owned by the Long Island none was used on December 26, four were used the next day and two on December 28. The road, he continued, used two of its seven steam-engine plow units on December 26 and three on December 27. None of the road's four detachable plows, for use on steam locomotives, had been used on December 26 and only three were used on the following day, he said. The road's one rotary plow was in operation throughout the storm and the two following days. The first patrol car, Mr. White said, was not sent out until 3:12 p. m. on December 26, at which time the snow had fallen to a depth of 15.8-in., and the first flanger-chloride train was put into service at 2:56 a. m. on December 27, when the snow was 25.8-in. deep.

Eugene L. Hoffmann, superintendent of the Long Island, on January 21 began his testimony in defense of the road's performance during the "worst storm" in its history. The storm cost the Long Island more than $1 million, he said, and its difficulties in coping with it were due in part, he asserted, to misleading official weather predictions and to a tie-up of several tracks resulting from a highway grade-crossing accident. With reference to the statement that only two scheduled electric trains were operated on December 27, Mr. Hofman testified that 242 shuttle trains were operated on the electric lines on that day and that most steam train services were performed.

The Long Island officer submitted a detailed report of train operations and of measures taken to cope with the storm during the period under investigation, following which he was subjected to a vigorous cross-examination.

Union Pacific Rearranges Divisional Organization

George F. Ashby, president of the Union Pacific, has announced that the road's operating divisions have been "streamlined," effective January 1, to provide "continuous direction over the major traffic flows."

Originally the road's operating divisions and district lines were established to conform with the corporate limits of the five properties which make up the railroad—the Union Pacific, the St. Joseph & Grand Island, the Oregon Short Line, the Oregon-Washington Railroad & Navigation, and the Los Angeles & Salt Lake.

"The district lines as established in conformity with corporate limits," Mr. Ashby explained, "have proven to be a barrier to the continuous flow not only of transcontinental traffic but the expanding through traffic within the areas of the railroad. Therefore, with the development of the West and in preparation for the even greater growth of the West in prospect, we have decided to rearrange these districts and divisions to provide the best and fastest service possible."

The major operating districts under the direction of three general managers now comprise seven operating divisions. The Nebraska, Wyoming and Kansas divisions, forming the Eastern district, continue under the direction of the general manager at Omaha, Neb. The Utah and California divisions, making up the South-Central district, will be under the direction of the general manager at Salt Lake City, Utah. The Oregon and Idaho divisions, comprising the Northwestern district, will be under the direction of the general manager at Portland, Ore.

The divisional organization is as follows:

Nebraska division—Extending from Council Bluffs, Iowa, to Cheyenne, Wyo., will remain unchanged, under the direction of a superintendent at Omaha.

Kansas division—With headquarters at Kansas City, will extend to, but not including Denver, Colo., to afford continuous direction of the through traffic between Kansas City and Denver and traffic originating in Kansas and Colorado.

Wyoming division—With headquarters at Cheyenne, is extended south to include Denver. It will terminate at Green River, Wyo., where through freight trains are made up for Idaho, Oregon and Washington on the north, and Utah, Nevada and California on the south.

Utah division—With headquarters at Salt Lake City, extends from Salt Lake City to Butte, Mont., and easterly from Ogden, Utah, and Pocatello, Idaho, to Green River. This will afford continuous direction under one superintendent of traffic from northern Utah, Idaho and Montana for Salt Lake City and California and through traffic to and from California, Nevada and Utah to Green River, where the traffic from the Northwest and Central California converges.

California division—the former Los Angeles division, with headquarters at Los Angeles, becomes the California division, extending from Los Angeles to Salt Lake City to afford continuous direction under one superintendent of through traffic between Southern California and the north and east and the traffic from the Salt Lake City area to Southern California.

Idaho division—With headquarters at Pocatello, now extends from Pocatello to Rieth, Ore., where traffic diverges to Oregon and Washington. Pocatello and the territory north and east have been transferred to the Utah division.

Oregon division—With headquarters at Portland, terminates at Rieth and the portion of that division east of Rieth has been transferred to the Idaho division.

Rail Labor Executives' Group Opposes St. Lawrence Seaway

Opposition to the proposed St. Lawrence seaway was expressed by the Railway Labor Executives' Association in a statement issued on January 19. The statement was made by the association's chairman, Harry W. Fraser, who is also president of the Order of Railway Conductors.

"When the so-called farseeing and progressive advocates of the preposterous St. Lawrence waterway project again raise their hue and cry that the project is being opposed by greedy and selfish interests, the railway workers of America want to be included in this avaricious group," Mr. Fraser said. "They are opposed to the project for the very fundamental pocketbook reason that they do not want to lose their jobs. If the national interest demanded that they be sacrificed in the interest of an experiment costing billions of dollars before final consummation, it would be different. But the national interest would not be served.

"There is no shortage of transportation facilities in this country today and none in the foreseeable future. The railroads do need and are trying to get new equipment. But ordinarily they have to scramble with other existing types of transportation for the trade. The spending of billions on a new and untried subsidized vehicle to add to their distress is wholly unjustified, particularly at a time when materials are scarce and inflation is threatening."

Trucker, Forwarder Overcharge Bill Approved by the House

The House of Representatives on January 13 passed H. R. 2759 which would amend the Interstate Commerce Act to provide a two-year limitation of the time within which actions may be brought for the recovery of undercharges and overcharges by or against motor carriers or freight forwarders. The bill, which is sponsored by Chairman Wolverton of the House committee on interstate and foreign commerce, also reduces from three to two years the period within which like actions, and actions for reparations, may be brought against water carriers, but it does nothing in the way of making motor carriers or forwarders liable for reparations. The two-year limitations would conform to the like provisions applicable to railroads.

Freight Car Loadings

Loadings of revenue freight for the week ended January 17 totaled 811,286 cars, the Association of American Railroads announced on January 22. This was a decrease of 20,161 cars or 2.4 per cent, below the preceding week, a decrease of 16,774 cars, or 2.0 per cent, below the corresponding week last year, and an increase of 61,843 cars, or 8.3 per cent, above the comparable 1946 week.

Loadings of revenue freight for the week ended January 10 totaled 821,447 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., appears below.

In Canada.—Carloadings for the week ended January 10 totaled 74,300 cars as compared with 53,484 cars for the previous week and 71,219 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
January 10, 1948	74,300	33,120
January 11, 1947	71,219	34,023
Cumulative totals for Canada:		
January 10, 1948	127,784	121,674
January 11, 1947	61,315	63,079

Wage Rise, 40-Hour Work Week Recommended in R. E. A. Dispute

A general wage increase of 15½ cents per hour, retroactive to September 1, 1947, and the replacement of the present six-day, 44-hour work week by a staggered five-day, 40-hour week, Monday to Saturday, are among the recommendations which have been submitted to President Truman by the emergency board he created to investigate a dispute between the Railway Express Agency and 4,700 of its vehicle and garage employees in the metropolitan New York area. The employees are represented by the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, American Federation of Labor.

The recommended wage increase embodies the same monetary adjustment and retroactivity previously granted by the R. E. A. to its approximately 70,000 other employees throughout the country. The board also recommended that an additional five cents per hour wage adjustment be made upon the installation of the reduced work week, but denied a union request to make Saturday a penalty day.

Revenue Freight Car Loadings
For the Week Ended Saturday, January 10

District	1948	1947	1946
Eastern	153,956	153,639	150,329
Allegheny	167,744	175,494	165,941
Pocahontas	73,299	74,531	59,523
Southern	145,612	141,995	122,837
Northwestern	90,854	93,028	91,029
Central Western	130,499	131,091	124,365
Southwestern	69,483	61,175	58,864
Total Western Districts	290,836	285,294	274,258
Total All Roads	831,447	830,953	772,888
Commodities:			
Grain and grain products	51,865	56,192	54,451
Livestock	14,029	21,503	18,148
Coal	202,487	203,466	170,066
Coke	14,983	14,357	12,983
Forest products	45,955	46,720	32,861
Ore	14,951	12,072	9,720
Merchandise l.c.l.	103,656	113,915	116,001
Miscellaneous	383,521	362,728	358,658
January 10	831,447	830,953	772,888
January 3	682,038	687,428	652,978
December 27	.. ..	599,357	627,967
December 20	.....	832,130	836,185
December 13	.....	854,199	828,751
Cumulative total, 2 weeks	1,513,485	1,518,381	1,425,866

Under the staggered 40-hour week, according to the board, drivers will receive $1.525 per hour, or $61 weekly, as compared to union demands of $1.85 per hour, or $74.10 weekly, and the R. E. A.'s offer of $1.475 per hour, or $64.90 weekly. The board pointed out that, under its recommendations, the drivers, in order to secure the five-day week, will give up $3.90 of the weekly wage offered by the R. E. A. It also asserted that the R. E. A.'s labor costs will not be greater than was contemplated by its own wage offer.

The mediation efforts of the board, according to the White House, succeeded in disposing of 62 contested matters, the most important of these settlements being the voluntary agreement reached by the parties to establish Board of Adjustment procedures for arbitration of grievances under the local agreement. The agreement formerly made no provision for appeal beyond the R. E. A.'s general manager. The board also disclaimed creation of a precedent for other areas or other classes of employees, pointing out that its conclusions are based on the conditions that prevail at present in the New York metropolitan area.

Members of the board, all New Yorkers, were Chairman Arthur S. Meyer, chairman of the New York State Board of Mediation; Frank M. Swacker, attorney, and Aaron Horvitz, labor relations consultant.

Treasury Officers Plan 1948 Meeting for September 13-15

E. R. Ford, secretary of the Treasury Division, Association of American Railroads, has announced that the division's annual meeting will be held September 13-15, inclusive, at the French Lick Hotel, French Lick, Ind. The announcement also stated that Division Chairman Harry Hurst (assistant treasurer of the Pennsylvania) had appointed V. A. Hewitt (secretary and treasurer of the Chicago, Indianapolis & Louisville) as chairman of the committee on arrangements for the meeting.

Transcontinental Bus Case Is Reopened by the I. C. C.

The Interstate Commerce Commission has reopened for further consideration the No. MC-F-3504 proceeding wherein a December 9, 1947, report by the commission's Division 4 approved the recently-organized Transcontinental Bus System's plans for building its proposed network of motor coach routes. The plans include arrangements for the acquisition of all passenger-carrier operating rights of the Atchison, Topeka & Santa Fe's subsidiary, Santa Fe Trail Transportation Company, which would receive a 39.1 per cent stock interest in Transcontinental.

The reopening came in a January 12 order, issued by the commission after consideration of petitions filed by American Bus Lines and the Amalgamated Association of Street, Electric Railway and Motor Coach Employees. Previously, the commission had ordered that the transactions approved in Division 4's report were not to be consummated before January 15 (see *Railway Age* of January 10, page 48). Division 4's report, noted in the issue of December 20, 1947, page 61, refused to impose labor-protection conditions, which had been sought by Amalgamated; and it was accompanied by an order denying a previous petition of American Bus Lines for further hearing—a denial which was protested by Commissioner Miller, who filed a separate dissenting expression.

New York Intrastate Commuter Fares Up 10 Per Cent

The New York State Public Service Commission on January 20 authorized the New York Central, the Pennsylvania, the Erie, the Delaware & Hudson and the Baltimore & Ohio to increase their intrastate commutation and school rates by 10 per cent. The increase, scheduled to remain in effect one year, will become effective on February 1.

1947 Dividend Changes—Correction

The list of dividend changes during 1947 which appeared on page 222 of the January 3 Statistical Issue of *Railway Age* was in error in stating that an initial payment of 25 cents on new common stock was made by the Minneapolis, St. Paul & Sault Ste. Marie. The dividends paid by that road were on its Series A common voting trust certificates, as stated in the item in which the erroneous statement also appeared.

Faricy Calls Wage Disputes A Serious Threat to Railroads

The possibility of a strike of certain operating employees or a 'third round" of wage increases is a serious threat not only to the railroads but also to the country as a whole, William T. Faricy, president of the Association of American Railroads, declared January 23 in an address at a joint luncheon of the Mid-West Shippers Advisory Board and the Traffic Club of Chicago at the LaSalle Hotel in that city. He warned that a third increase in railroad wages "would deal a severe blow to the railroads and the nation."

Mr. Faricy said that the strike set for February 1 by the engineers, the firemen and a small minority of the switchmen will doubtless be headed off temporarily by the appointment of an emergency "fact-finding" board, but he added that "some 60 days hence it is entirely possible that the country will be facing some such crisis as that which the same engineer's brotherhood, among others, brought on in May, 1946."

"Fight to a Finish—Pointing out that the present critical railroad labor situation is the result of the refusal of 10 per cent of the railroad employees to accept the 15½ cents-an-hour increase accepted by all other railroad unions, the A.A.R. president maintained that "it should be obvious to anybody that the railroads cannot give those classes of employees better treatment than the other 90 per cent of employees have received, without laying themselves open to a third round of wage increases."

"That is why the railroads simply have to fight this case to a finish," he said.

Except for the threat of additional wage increases, Mr. Faricy continued, "the railroads will probably have a reasonably good year in 1948."

Mr. Faricy stated that he does not see in the recent nationalization of the British railroads a trend that will engulf the railroads of this country in the tide of government operation. Government operation of the railroads is not in the picture in the United States, he said, because the people do not want it; this country is profoundly devoted to the principle of private enterprise; experience has shown that the railroads can do a better job under private ownership and operation than when they are in government hands, and the Interstate Commerce Commission is becoming increasingly aware of the necessity of keeping railroad rates more nearly in line with increased expenses.

Mr. Faricy said that in spite of a car shortage and other difficulties, "the railroads have now demonstrated beyond question their ability to handle successfully whatever volume of traffic our economy is going to require." They did this last year, he went on, by moving more tons of freight more miles than ever before in time of peace and by moving more grain and more coal than in any previous year.

The two temporary increases in freight rates within a three-month period late last year were regarded by Mr. Faricy as evidence that the Interstate Commerce Commission "is fully alive to the fact that to have a healthy system of rail transportation, the railroads must have revenues that will keep pace with rising expenses."

Although there is still a large gap between what the railroads take in and what they pay out, Mr. Faricy concluded, "the grasp that the I.C.C. is showing of this problem gives promise that when the final decision in the rate case is made, the railroads will have revenues which will give them a real chance."

C. & O. Not Opposed To Joint Rate Action

The objections of the Chesapeake & Ohio to the Reed and Bulwinkle bills are directed not against rate bureaus as such, but only against features of the proposed legislation which the road deems inimicable to the interests of the railroads and the public, Robert J. Bowman, C. & O. president, said in Philadelphia, Pa., on January 14 before

a meeting of the Atlantic States Shippers Advisory Board.

Although the C. & O. believes it is essential that railroads confer and act concertedly on rates, he said, it cannot conscientiously support legislation which would authorize agreements by railroads that might deprive the public of improvements in services and facilities. The C. & O., Mr. Bowman added, is fully aware of the need for rate bureaus or rate associations empowered to announce rate proposals and authorize public hearings on such proposals and at no time has the C. & O. favored the abolition of rate bureaus despite its belief that the existing, cumbersome procedures should be streamlined and otherwise modernized.

December, 1947, Revenues 24.1 Per Cent Above Those in 1946

From preliminary reports of 85 Class I Railroads, representing 81.3 per cent of total operating revenues, the Association of American Railroads has estimated that the December, 1947, gross amounted to $643,236,999, an increase of 24.1 per cent above the $518,190,461 reported for the same 1946 month. The December gross, according to the A.A.R. statement, reflects the first Ex Parte 166 interim increase in freight rates which became effective last October, and also the 25 per cent interim increase in mail pay which was authorized last month, retroactive to February 19, 1947.

Estimated December, 1947, freight revenues were $499,812,605, as compared with $399,412,817 an increase of 25.1 per cent, while estimated passenger revenues were $73,904,533, as compared with $76,587,929, a decrease of 3.5 per cent. The estimate for other revenues, including the mail pay increase from February 19, 1947, to December 31, was $69,519,861, as compared with $42,189,715, an increase of 64.8 per cent.

House Group Criticizes Air Mail Subsidies, Railway Mail Service

Criticism of the railway mail service and of subsidies received by the scheduled air lines for carrying air mail are included in a preliminary report made public by the House committee on post office and civil service, which is currently engaged in a survey and study of the postal service to determine where savings may be made in order to reduce the $325,000,000 deficit facing the Post Office Department. In addition to outlining action taken to date and pointing out problems to be solved in the future, the report also serves, the committee indicated, as a basis for its estimate that $50,000,000 may be saved yearly in operating the postal service.

According to the committee, of the $25,000,000 the scheduled air lines will receive for carrying air mail last year, in excess of $15,000,000 may be considered a subsidy. Because payments to the air lines are based upon need rather than the service performed, it said, such a system does not place a premium on efficiency.

At the same time, the committee asserted that (1) the reduction by scheduled carriers of air-freight rates on the commodities and at the shipping points available to the non-certificated air freight carriers (which are ineligible for air mail subsidies) combined with the application by the former for increased air mail pay, appears to have placed the Post Office Department in the position of financing a rate war between two groups of air carriers; (2) separation of the amount of subsidy paid domestic air lines from purely compensatory payments for carrying air mail will correct many evils in the existing situation; and (3) in paying the air mail subsidy, the Post Office Department is called upon to finance inefficient management, parties, hotel suites, entertainment, excessive public relations costs, and competition between existing scheduled carriers.

Noting that an estimated 144,000,000 parcels may be sent by air parcel post annually, the committee said that although there is real demand for air parcel post service by the air carriers and public, such service must be made available to the public at rates which would attract volume business. Air parcel post rates, it contended, should not be affected by the subsidy element, adding that such service should be made available from its inception at points where sufficient volume of air parcel post will be generated to warrant reasonable rates.

In its discussion of the railway mail service, the committee reported that its preliminary studies disclosed that (1) deficiency time (the difference between the individual's daily average hours on duty and the maximum hours of the assignment set by law) can be reduced by improving coordination between post offices, railroads and the railway mail service; (2) the responsibility of the railroads for loading and unloading mail from baggage cars is not strictly observed; (3) more economical means of mail transport should be explored; and (4) because employees assigned to railroad and airport terminals are under the jurisdiction of the railway mail service, they are rarely given road assignments.

According to the committee, the Post Office Department, under rates set by the Interstate Commerce Commission, pays for storage cars on a round-trip basis and that the space deadheaded on the return movement costs $15,000,000 annually. In many instances, it added, these "storage cars" are freight cars. At the same time, it observed that the recent commission order increasing railroad mail pay emphasizes the need for carefully computing payments for space in the most complete manner possible.

The report said further that the problem of accounting for space used by the Post Office Department in baggage cars is being examined by the General Accounting Office. The G. A. O., it added, also is examining the possibility of a more complete utilization of unused space in railway baggage cars for government shipments both by mail and for other than mail.

Lehigh Valley to Move Engineering Department

Plans for removal of the offices of the engineering department of the Lehigh Valley, under the jurisdiction of Ralph E. Patterson, chief engineer, from their present locations in New York to Bethlehem, Pa., have been approved. Quarters on the second floor of the union passenger station at Bethlehem are being prepared for the purpose. The change will be made March 1.

Emergency Board Report

The emergency board which President Truman appointed to investigate a dispute between the Georgia and certain of its employees who are represented by the Brotherhood of Locomotive Firemen & Enginemen reported to the White House on January 21 that the controversy had been settled. Working rules and seniority arrangements were involved, and the settlement came by agreement between the parties after the board had completed its public hearings.

Proposes Increased Divisions For the Hudson & Manhattan

Increased divisions for the Hudson & Manhattan out of passenger revenues from the joint service it maintains with the Pennsylvania have been recommended in a proposed report which the Interstate Commerce Commission has received from Examiner Irving L. Koch. The joint service is that operated between Harrison, N. J., and Newark and points on P. R. R. lines west thereof, on the one hand, and the H. & M. terminals in New York City, on the other.

When the record in the case was closed, the H. & M. divisions, which became effective August 1, 1947, after a previous adjustment one month earlier, were 8.78 cents per passenger transported over its downtown line into Hudson Terminal, New York, and 9.78 cents per passenger carried on the uptown line which terminates at West 33rd street. Examiner Koch recommends increases to 11.5 cents and 12.5 cents, respectively.

Meanwhile, however, he would have the commission find that the present H. & M. division of 5 cents per passenger handled in so-called joint-rate service with the P. R. R. had not been shown to be unlawful. The joint-rate service is that in which the H. & M. carries to New York passengers (principally commuters) leaving P. R. R. trains at the latter's Exchange Place station in Jersey City. The proposed report is in the No. 29411 proceeding

which involves an H. & M. complaint that assails the present divisions as unjust, unreasonable, and inequitable.

Two Emergency Boards Named

President Truman has issued executive orders creating emergency boards to investigate a wage and rules dispute on the Chicago North Shore & Milwaukee and a rules dispute on the Akron & Barberton Belt. The employees involved are represented, respectively, by the Amalgamated Association of Street Electric Railway and Motor Coach Employees, and the Brotherhood of Railroad Trainmen.

CAR SERVICE

I. C. C. Service Order No. 104 (sixth revised), which provides for the substitution of RS type refrigerator cars for box cars ordered for westbound carload shipments, was modified by Amendment No. 2, effective January 16. The amendment modifies paragraph (c) (3) so that refrigerator cars moving under provisions of the order may be stopped in transit for partial unloading in the specified western territory when the freight unloaded at the stop-off point will amount to a minimum of 10,000 lb. or the entire contents of a car loaded to visible capacity. The latter provision will make it possible to take advantage of the stop-off privilege even though the commodity is so light and bulky that 10,000 lb. cannot be loaded in a single refrigerator car.

I. C. C. Service Order No. 775, which maintains superdemurrage charges on all types of freight cars, has been modified by Amendments Nos. 5 and 6. Amendment No. 5 suspended the $11 and $16.50 charges on all cars except tank cars from 7 a.m. January 19 until further notice. Amendment No. 6 grants relief from the entire order in connection with cars affected by a strike of truckers in the Boston, Mass., area.

I. C. C. Service Order No. 798, which makes loaded private tank cars on private tracks subject to demurrage rules, has been modified by Amendment No. 5, which exempts cars loaded with XX heavy special electrical cable insulating oil.

ORGANIZATIONS

The **Maintenance of Way Club of Chicago** will meet at 6:30 p.m. on January 26 at Harding's Restaurant in the Fair store, Chicago, at which time L. L. Adams, assistant chief engineer of the Louisville & Nashville, will describe and present pictures of the hurricane and high-water damage on the L. & N. last September.

S. E. McKay, advertising agent of the Baltimore & Ohio at Chicago, was elected president of the **Association of Railroad Advertising Managers** at its annual meeting in Chicago on January 17. The following were elected vice-presidents: H. B. Northcott, Union Pacific, Omaha, Neb.; Mac G. Collins, New York Central, New York; and Walter S. Jackson, Chesapeake & Ohio, Cleveland, Ohio. Re-elected were: treasurer, A. W. Eckstein, Illinois Central, Chicago; secretary, E. A. Abbott, free-lance travel writer, Evanston, Ill.; and assistant secretary, C. D. Perrin, Poole Brothers, railroad printers, Chicago.

The next meeting of the New York division of **Railroad Enthusiasts, Inc.**, scheduled at 7:45 p.m., on January 28, will hear a talk on the history, development, present status and future of railroad rail by C. B. Bronson of the New York Central.

The **Traffic Club of Newark** will hold its 38th annual dinner at the Robert Treat Hotel, Newark, N. J., on January 29.

A meeting of the **Indianapolis Car Inspection Association** will be held at the Indianapolis (Ind.) Union Station at 7 p.m., February 2. The program scheduled is a discussion of 1948 A. A. R. rules.

The **Northwest Car Men's Association** will meet on February 2 at 8 p.m., at the Midway Club, St. Paul, Minn. A discussion of the proposed changes in A. A. R. interchange rules has been scheduled.

A meeting of the **Western Railway Club** is scheduled for February 2 at 6 p.m., at the Hotel Sherman, Chicago. Dr. Frank A. Court will be the guest speaker.

The 34th annual dinner of the **Traffic Club of Cleveland** (Ohio) will be held at the Hotel Cleveland on February 5 at 6:30 p.m. Clark B. Hungerford, president of the St. Louis-San Francisco, will be the guest speaker. At a recent meeting of the club H. D. Rhodehouse, general traffic manager, Republic Steel Corporation, Cleveland, was elected 1st vice-president.

John S. Burchmore, counsel of the National Industrial Traffic League, will address the **Transportation Club of the Rochester Chamber of Commerce** at their 24th annual dinner on February 5 at Rochester, N. Y.

At a recent meeting the club elected the following officers for the year 1948: President—Arthur J. Dailor, W. N. Clark Company; 1st vice-president—Charles E. Farnung, Rochester Carting Company; 2nd vice-president—Albert J. Monro, Blanchard Storage Co.; secretary-treasurer—**Frederick W. Burton**, Rochester Chamber of Commerce; and assistant secretary—Warren A. Rawson, Rochester Chamber of Commerce.

A meeting of the **Car Foremen's Association of Chicago** has been scheduled for February 9 at the Hotel LaSalle, Chicago, at 8 p.m. A discussion of the proposed changes in A. A. R. rules has been scheduled.

SUPPLY TRADE

William L. Lentz, a vice-president of the **American Locomotive Company** and a member of the firm's administrative committee, has added to his present duties those of **J. B. Ennis**, senior vice-president, who has retired. **Frank J. Foley**, a former director and vice-president, who has been serving as a consultant for the last year, also has retired.

Lane Lovell, formerly assistant manager of railroad sales of the **Love-Dressel Company**, has been elected first vice-president of the firm, in charge of railroad sales.

R. L. McCaffrey, formerly sales promotion man for the motor truck division of the **International Harvester Company**, at Lincoln, Nebr., has been appointed assistant manager of that branch, to succeed **J. R. Scott**, who has been transferred to Grand Island, Nebr., in the same capacity.

The **American Brake Shoe Company** has announced the appointment of **John A. Fellows** as assistant chief metallurgist at its research center in Mahwah, N. J. Mr. Fellows is resuming his association with the company after 2½ years' service in the atomic energy field and 1½ years with the Union Carbon & Carbide Co. He originally joined Brake Shoe as assistant metallurgist in December,

John A. Fellows

1937. The company also has announced the appointment of **J. Robert Pauline**, formerly assistant to the vice-president in charge of operations and engineering, as works manager of its Kellogg division, with headquarters in Rochester, N. Y.

W. H. Scherer, who has been appointed general manager and elected a director of the **Ransome Machinery Company**, a subsidiary of the Worthington Pump & Machinery Corp., as announced in *Railway Age* of January 10, was assistant

W. H. Scherer

superintendent of the East Springfield, Mass., works of the Westinghouse Electric Corporation for 20 years. He joined Worthington Pump & Machinery in 1937 as superintendent of the Holyoke, Mass., works, and was later appointed assistant to the vice-president in charge of manufacturing. He has been acting manager of Ransome Machinery since June, 1947.

A. C. Heehler, formerly with the Mars Signal Light Company of Chicago, has been appointed sales engineer of the **Pyle-National Company**, also of Chicago.

The Hewitt Rubber division of **Hewitt-Robins, Inc.**, has announced the appointment of the **Monarch Electrical Company** of LaSalle, Ill., as a distributor for its entire line of industrial hose, conveyor and transmission belting and packing.

R. G. LeTourneau, Inc., has announced the formation of a wire rope sales department at the Peoria, Ill., plant, as part of the sales division. **W. H. Wilson** has been appointed wire rope sales manager.

The **Dampney Company of America**, Hyde Park, Boston, Mass., has announced the appointment of **W. T. Quimby**, Springfield, Mass., as special representative in the New York area for Apexior and Thur-ma-lox protective coatings.

Bowser, Inc., Fort Wayne, Ind., has purchased the entire liquid processing division of the **Buckeye Laboratories Corporation** of Cleveland, Ohio, it has been announced. **Robert H. Webster**, former general manager of Buckeye Laboratories, has joined Bowser as sales manager of the new division.

A. C. Kuss, Jr., of Allentown, Pa., has been appointed executive vice-president of the **Transportation Sash Company**, Topton, Pa.

G. V. Slottman, formerly manager of the technical sales division of the **Air Reduction Sales Company**, has been appointed technical assistant to the vice-president. The appointments of **Scott D. Baumer**, formerly assistant manager of the division, as manager, and **Edward H. Roper** as assistant manager, also were announced.

Truck-Man, Inc., formerly a division of **Yard-Man, Inc.**, Jackson, Mich., has been incorporated as a separate and distinct unit, with **T. B. Funk** as president, **W. S. Butterfield** as secretary and treasurer, and **Walter Mayer** as general manager.

E. A. Hutson has been appointed railway sales field engineer in the Chicago district office of **SKF Industries, Inc.**

H. Merrill Bowman, district sales manager of the **Link-Belt Company** at Baltimore, Md., has been appointed assistant divisional sales manager for power transmission equipment, with headquarters at the company's Pershing Road plant in Chicago. Mr. Bowman is succeeded by **Eugene S. Bogart**, who has been transferred from Pittsburgh (Pa.).

OBITUARY

Charles H. White, director of sales of the South and West regions of Industrial Brownhoist Corporation at Chicago, whose death on December 24, 1947, at Cleveland, Ohio, was reported in *Railway Age* of January 3, was born at Mansfield, Ohio, on March 17, 1888. Mr. White joined the Brown Hoisting Machinery Company (now Industrial Brownhoist Corporation) in 1907, serving in the time, cost and traffic departments until March 25, 1917, when he

Charles H. White

was transferred to the sales department. From 1921 until 1927 he was southern manager at New Orleans, La., and in April, 1927, he was appointed district sales manager, with headquarters at Chicago. Since August, 1946, he had been director of sales of the South and West regions, with the same headquarters. Mr. White was a member of the National Railway Appliances Association, serving as president in 1936, and as secretary and director of exhibits since 1935.

Edwin Hulme McIllvain, medical director of the Budd Company, died at his home in Oak Lane, Philadelphia, Pa., on January 15.

Oswald O. Williams, assistant general manager of sales of the Magor Car Corporation since 1932, died at his home in Passaic, N. J., on January 13. Mr. Williams had been associated with Magor for 31 years.

Arnold Stucki, who organized, in 1905, the A. Stucki Company, of which he was president since its incorporation in 1911, died at his home in Bellevue, Pa., on January 11. Mr. Stucki was born in Meringen, Switzerland, on October 30, 1862. After coming to the United States, he was employed by the Penn-

Arnold Stucki

sylvania from 1889 to 1900 and in the latter year he joined the Pressed Steel Car Company as a mechanical engineer. In 1903 he went to the Standard Steel Car Company as chief engineer. Two years later he organized the A. Stucki Company for the manufacture of side bearings.

W. Tom Ashe, sales representative of the Railway Truck Corporation, with headquarters at Chicago, died at Mercy hospital in that city on January 18, following a short illness.

EQUIPMENT AND SUPPLIES

IRON and STEEL

The **Alaska** has awarded a contract to the Carnegie-Illinois Steel Corporation for the delivery of 37,000 tons of rail. The inquiry for this rail was reported in the *Railway Age* of December 13, 1947.

The **Atlantic Coast Line** has ordered 51,000 net tons of steel rails for its

1948 requirements. The orders were placed with the Tennessee Coal, Iron & Railroad Co. and the Bethlehem Steel Company.

The **Chesapeake & Ohio** has ordered 29,464 gross tons of steel rails from the Carnegie-Illinois Steel Corporation, 10,714 gross tons from the Inland Steel Company and 8,786 gross tons from the Bethlehem Steel Company.

FREIGHT CARS

The **Illinois Central** has ordered 1,000 all-steel, 50-ton coal hopper cars from the Pullman-Standard Car Manufacturing Company, at an approximate cost of $4,000,000.

The **New York Central** is inquiring for 2,000 55-ton box cars, 2,000 55-ton hopper cars and 1,000 70-ton gondola cars.

The **Wheeling & Lake Erie** is inquiring for 500 50-ton drop-end gondola cars.

CROSSTIES

The **Alaska** is inquiring for 300,000 treated crossties.

SIGNALING

The **Pittsburgh & Lake Erie** has placed an order with the Union Switch & Signal Co., covering the necessary signal material for the installation of centralized traffic control on 5.2 mi. of double track and 2.4 mi. of single track between Robinson, Pa., and Youngstown, Ohio. A 5-ft. Style-C machine for this territory will be located at East Youngstown. The order includes Style-H-2 searchlight signals, Style-M-22A dual-control electric switch and lock movements, Style-SL-25 electric switch locks, with the necessary relays, rectifiers, transformers and housings. The field installation will be handled by the regular signal construction forces of the railroad.

CONSTRUCTION

Atlantic Coast Line.—This road has authorized the following projects, the probable costs of which are shown in parentheses: Installation of automatic highway crossing signals at Emporia, Va. ($70,015), and the construction of track facilities at Winter Haven, Fla. ($23,740).

Canadian National.—The following contracts have been awarded on the Western region of this road: To the Dominion Bridge Company, of Winnipeg, Man., for the fabrication, delivery and erection of a 100-ft., three-point support turntable at Fort Rouge yards in Winnepeg; and to the Western Construction & Lumber Co., of Edmonton, Alta., for supplying of 230,000 cu. yd. of improved ballast from the railroad-owned pit near Kinsella, Alta. The latter work consists of clearing, stripping, excavating, screening, crushing and hauling of the ballast to the stockpile or loading it into railroad cars, as may be required.

Chesapeake & Ohio.—This company has asked the Interstate Commerce Commission to authorize the construction by it of an extension to its so-called Logan Subdivision, extending from a point near West Gilbert, W. Va., to a point on Horsepen Creek, approximately 6.9 miles. Service was requested by the United States Coal & Coke Co. to facilitate the development of large coal deposits. Noting that it also has been advised by the mining company that a similar request to provide railroad service has been made upon the Norfolk & Western, the C. & O. said it has informed the N. & W. that it is ready to discuss detailed plans looking to possible joint use of facilities leading to the mines. The shipper, according to the C. & O., desires both roads to have equal access to the proposed mines.

Chesapeake & Ohio.—This road has awarded the following contracts, the estimated costs of which are shown in parentheses: To the Sutton Company, Radford, Va., for constructing additional yard tracks at Balcony Falls, Va., ($53,575); to the Ogle Construction Company, Chicago, for replacing a frame coaling station with a 75-ton concrete structure at Lynchburg, Va., ($37,800); to the Forbes Construction Company, Huntington, W. Va., for constructing tracks to serve a mine development at Stowe, W. Va. ($158,150) and at Shamrock, W. Va. ($87,000); to the Smith Construction Company, Huntington, for constructing tracks to serve a mine development at West Virginia #2, W. Va. ($106,200); to Haley, Chisholm & Morris, Inc., Charlottesville, Va., for constructing additional yard tracks at Handley, W. Va. ($183,600), and for drainage at the west end of the Allegheny tunnel, Tuckahoe, W. Va. ($56,300); and to B. F. Parrott, & Co., Roanoke, Va., for constructing a trainmen's bunkhouse at Elk, W. Va. ($44,900).

The following projects, for which bids will be requested, have been authorized and their probable costs are given in parentheses: Constructing an electric drop pit table in a roundhouse at Peach Creek, W. Va. ($27,000); an electric drop table to serve 2 tracks in a roundhouse at Handley ($27,300); enlargement of a water storage reservoir at Olive Hill, Ky. ($38,000); extending a roundhouse by 15-ft., installing 5 electric drop tables and an additional engine hoist at Russell, Ky. ($220,700); extending 3 stalls, installing a drop pit and constructing a fire wall in a roundhouse at Peru, Ind. ($93,000); and constructing additional tracks in the eastbound yard at Walbridge, Ohio ($84,500). In addition, the following projects, to be undertaken by the road's own forces, have been authorized: Rearranging automatic block and c.t.c. signals between Richmond, Va., and Gordonsville, and between Orange, Va., and Clifton Forge ($114,300); constructing additional car icing tracks at Clifton Forge ($35,100); constructing tracks to serve a mine development at Pikeville, Ky. ($50,600); providing radio communication between the dispatcher's office and trains from Parsons, Ohio, to Marion ($104,000); and providing additional interlocking switches and signals ($88,000) and additional storage and set off tracks at Presque Isle, Ohio ($52,525).

Also, on January 19, the road's board of directors authorized the construction of 17 additional tracks in the Walbridge yard at Toledo, Ohio, at an estimated cost of $1,500,000. C. & O. officials said enlargement of the Toledo facilities is necessary because of greatly increased lake coal dumpings at Presque Isle. Two of the new tracks will be used for receiving coal trains incoming from the mines. The other 15 tracks will be equipped with electro-pneumatic car retarders and will be used for the classification of cars.

Erie.—This road has announced a proposal to build a new passenger station at East 131st street and Miles avenue, Cleveland, Ohio, to replace the present station at East 93rd street, which will be removed. January 30 has been set as the date for hearing the Erie's application to the Ohio Public Utility Commission for permission to substitute the new location for the present East 93rd street station. The new station, to be situated on the eastbound or southerly side of the tracks, will be 20-ft. wide by 50-ft. long with brick walls, concrete foundation and floors and a composition shingle roof.

FINANCIAL

Baltimore & Ohio.—*Equipment Trust Certificates.*—This road has requested bids by January 26 for the purchase of $4,000,000 of series X equipment trust certificates to be dated February 1, 1948, and mature in equal annual instalments on each February 1 from 1949 to 1958, inclusive. Proceeds from the sale of the certificates will supply about 80 per cent of the net cost of 1,200 70-ton steel hopper cars to be built by the Pullman-Standard Car Manufacturing Company.

Chicago, Milwaukee, St. Paul & Pacific.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $5,040,000 of Series CC equipment trust certificates, the proceeds of which will be applied toward the cost of 1,000 50-ton all-steel box cars, at an estimated unit cost of $3,500, and

the following passenger-train equipment, all of which will be constructed in the applicant's own shops:

Description	Estimated Unit Cost
2 all-steel baggage-dormitory cars	$59,369
17 all-steel mail and express cars	44,538
20 all-steel baggage cars	39,201
23 all-steel passenger coaches	67,641
2 railway postal cars	43,462

The certificates, to be sold on the basis of competitive bidding, would be dated February 1 and would mature in 20 semi-annual installments of $252,000, starting August 1.

Chesapeake & Ohio.—*Equipment Trust Certificates.*—This road has requested bids by February 3 for the purchase of $4,900,000 of serial equipment trust certificates of 1948, proceeds from the sale of which would be used to buy 1,000 70-ton steel hopper cars, 500 50-ton steel gondola cars and 6 switching locomotives. The total cost of the equipment is estimated at $6,157,122. To be dated February 15, 1948, the certificates would mature in equal annual installments from February 15, 1949, to February 15, 1958, inclusive. Bidders were asked to specify a dividend rate which must be some multiple of one-eighth of one per cent and the same for all maturities. No bid for less than 99 will be considered.

Delaware, Lackawanna & Western.—*Nickel Plate Stock Purchase.*—At this time the Lackawanna holds well in excess of 40,000 shares of common stock of the New York, Chicago & St. Louis, purchased with treasury cash, and it expects to buy more if favorable prices can be obtained, according to William White, president of the Lackawanna. There is no conflict of interest between the Lackawanna and the groups associated with the Nickel Plate management, which also have been acquiring Nickel Plate common stock on the market, much of which became available upon distribution of the holdings of the Chesapeake & Ohio to its shareholders. The Lackawanna is not presently seeking representation on the Nickel Plate board of directors, but it is in sympathy with that board's attitude toward a merger of the Nickel Plate and Wheeling & Lake Erie, and hopes to work with the Nickel Plate management to effect steps short of a merger which will cement the close relation between the Lackawanna and Nickel Plate and lead eventually to their corporate affiliation.

Missouri Pacific.—*Plans to Sell Bus Subsidiary.*—This road has asked the federal district court at St. Louis, Mo., for authority to sell its wholly owned bus subsidiary—the Missouri Pacific Transportation Company—to the American Bus Lines of Chicago for $3,819,998. Objections to the proposed sale have been entered by the Continental Bus Lines and Dixie Bus Lines of Dallas, Tex., who contend that a bid of more than $4,100,000 for the company's purchase had been submitted by them. The railroad has asserted, however, that profits accruing before the proposed June 30 transfer date would actually increase the sale price to American Bus Lines to $4,216,368.

Missouri Pacific.—*Plan of Reorganization.*—Acting upon the requests and agreements of counsel for numerous parties for further postponement, the Interstate Commerce Commission has set back to March 23 the further hearing it had previously scheduled for January 27 on the reorganization proceedings of this road. As noted in *Railway Age* of November 15, 1947, page 250, and previous issues, the hearing will be for the purpose of receiving further evidence pursuant to orders entered last September by federal courts referring the commission-approved reorganization plan of 1944 back to the commission. Return of the plan was recommended by the commission.

The commission also has ordered to be filed as part of the record of the proceedings a January 14 report by its Bureau of Valuation of the elements of value, as of December 31, 1945, of the properties of the M. P. and its subsidiary debtors.

Average Prices Stocks and Bonds

	Jan. 20	Last week	Last year
Average price of 20 representative railway stocks	48.06	49.06	49.03
Average price of 20 representative railway bonds	86.34	86.33	91.35

Dividends Declared

Atlantic Coast Line.—$1.00, quarterly, payable March 12 to holders of record February 13.

Georgia.—$1.75, quarterly, payable January 15 to holders of record January 2.

Green Bay & Western. — common, $5.00, payable February 16 to holders of record February 6; income debentures "A", $50.00, pay able February 16.

Louisville & Nashville.—88¢, quarterly, payable March 12 to holders of record January 30.

Mine Hill & Schuylkill Haven.—$1.00, semi-annually, payable February 2 to holders of record January 15.

North Carolina. — 7% guaranteed, $3.50, semi-annually, payable February 2 to holders of record January 12.

Northern of New Hampshire.—$1.50, quarterly, payable January 31 to hloders of record January 15.

RAILWAY OFFICERS

EXECUTIVE

C. J. Stephenson, vice-president and general superintendent of the St. Louis, San Francisco & Texas, has been appointed vice-president and general manager, with headquarters as before at Fort Worth, Tex.

F. H. Knickerbocker, executive assistant to the president of the Union Pacific, with headquarters at Los Angeles, Cal., and Salt Lake City, Utah, has retired after a railroad career of nearly 51 years.

F. V. Koval, advertising and publicity manager of the Chicago & North Western at Chicago, has been promoted to assistant to the president, in charge of public relations.

William Wallace Cox, whose election as vice-president and comptroller of the Delaware & Hudson at New York was reported in the *Railway Age* of January 3, was born at San Antonio, Tex. After attending Texas Christian University and taking a course in commercial law and accounting practices

William Wallace Cox

at Waco, Tex., Mr. Cox entered railroad service in April, 1907, with the Gulf, Colorado & Santa Fe. He served in various clerical accounting positions until 1911 when he became head of the freight accounting department of that road. Mr. Cox went with the D. & H. in April, 1919, and in February, 1921, he became assistant to comptroller. He was appointed assistant comptroller in June, 1929, and became comptroller in February, 1935, holding the latter position until his recent election.

Jonathan C. Gibson, whose promotion to vice-president and general counsel of the Atchison, Topeka & Santa Fe,

Jonathan C. Gibson

with headquarters at Chicago, was reported in the *Railway Age* of January 3, was born at Culpeper, Va., on July 26, 1897, and received his higher education at George Washington University in Washington, D. C. From 1923 to

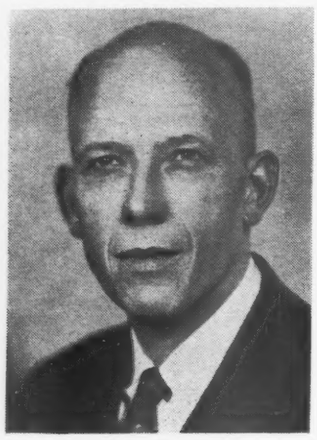
1930, he served as an examiner for the Interstate Commerce Commission at Washington, being a member of the valuation board of review of the commission from 1925 to 1929, and chairman of the recapture board from 1929 to 1930. Mr. Gibson was engaged in the private practice of law from 1930 to 1934, when he entered the service of the Santa Fe as general attorney, serving at Houston, Tex., Los Angeles, Cal., and Kansas City, Mo. In 1942, he became general attorney of the Santa Fe for the state of California, with headquarters at Los Angeles, and was further advanced to general solicitor at Chicago in February, 1946. Mr. Gibson was serving in the latter capacity at the time of his recent promotion.

Earl T. Moore, chief executive officer of the Central of New Jersey, and president of the Central of Pennsylvania, has been elected also president of the Raritan River railroad, succeeding **William Wyer**, resigned.

Allan C. MacDonald, assistant to the president of the Canadian Pacific at Montreal, Que., has been promoted to executive assistant to the president. A biography and photograph of Mr. MacDonald were published in *Railway Age* of February 8, 1947, page 343.

FINANCIAL, LEGAL and ACCOUNTING

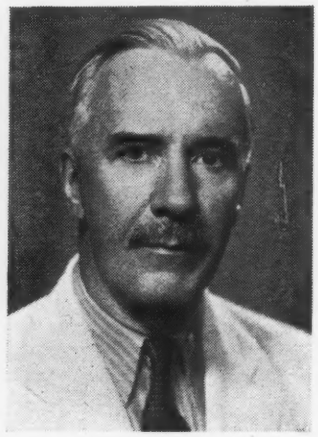
H. L. Kendall, whose promotion to auditor of disbursements of the Spokane, Portland & Seattle, at Portland, Ore., was reported in *Railway Age* of December 20, 1947, was born on December



H. L. Kendall

22, 1896, at St. Paul Park, Minn., and received his higher education at Galahad Academy in Hudson, Wis. He began his railroad career in 1916 in the accounting department of the Northern Pacific, at St. Paul, and the following year he joined the S. P. & S. in its accounting department. He subsequently held various positions in that department. becoming traveling accountant in 1924 and chief clerk in the office of the auditor of disbursements in 1933. Mr. Kendall held the latter position at the time of his recent appointment.

R. S. Outlaw, whose promotion to general solicitor of the Atchison, Topeka & Santa Fe, at Chicago, was reported in the *Railway Age* of January 3, was born on December 16, 1889, at New Orleans, La. Mr. Outlaw was educated



R. S. Outlaw

at the elementary and high schools in New Orleans, and at Tulane University, from which he received his law degree in 1911. He practiced law until 1914, at which time he joined the Santa Fe, becoming commerce attorney for that road in 1924 and general attorney at Chicago in 1934. He was serving in the latter capacity at the time of his new appointment.

C. O. Amonette and **Evan J. Foulds**, general attorneys of the Southern Pacific, have been appointed assistant general counsel, with headquarters as before at San Francisco, Cal.

Harry C. Gutz has been appointed to the newly created position of auditor, machine bureau, of the Great Northern at St. Paul, Minn.

OPERATING

Ralph Johnson, whose appointment as superintendent of the International-Great Northern (part of the Missouri Pacific), at Palestine, Tex., was reported in *Railway Age* of December 20, 1947, was born on December 4, 1898, in Kansas, and began his railroad career as a crew caller with the M. P. at Greenleaf, Kan. He later served successively as telegrapher, train dispatcher, chief dispatcher and assistant trainmaster. Mr. Johnson became trainmaster in 1936, holding that position at several points on the M. P. until 1944, when he was appointed assistant superintendent at DeQuincy, La. He was serving in the latter capacity at the time of his recent appointment.

J. F. Nash has been appointed assistant to general manager, New York Central system, at Syracuse, N. Y.

C. F. Grimes, assistant to assistant general manager, Buffalo and East, at Syracuse, has been appointed assistant superintendent of the Hudson and Mohawk divisions, with headquarters at Albany, N. Y. **G. W. Maxwell** has been appointed trainmaster of the Buffalo (N. Y.) division.

TRAFFIC

Henry J. Polack, whose retirement as assistant fuel traffic manager of the Chicago, Burlington & Quincy, at Chicago, was reported in *Railway Age* of December 6, 1947, was born on November 14, 1877, at Coldwater, Mich. He entered railroad service with the Burlington in 1891 as an office boy at Chicago and advanced to chief clerk to assistant general freight agent in 1905. Following periods during which he served as chief clerk in the general freight department and to the freight traffic manager, Mr. Polack became assistant to coal traffic manager in March, 1922. He was appointed assistant coal traffic manager in 1937, and in 1940 was advanced to assistant fuel traffic manager, the position he held at the time of his retirement.

Harry Sengstacken, whose promotion to passenger traffic manager of the Chicago, Milwaukee, St. Paul & Pacific, at Chicago, was reported in the *Railway Age* of January 10, began his railroad career in 1915. Joining the Milwaukee Road's freight traffic department at New York in 1926, Mr. Sengstacken was appointed general agent at Boston, Mass., in 1936, and general passenger agent at Chicago in 1938. He was further advanced to assistant

Harry Sengstacken

passenger traffic manager at Chicago on March 1, 1944, which position he held at the time of his recent promotion.

Harry C. Schmidt, whose appointment as general freight traffic manager of the Delaware, Lackawanna & Western at New York was reported in *Railway Age* of January 3, was born at Chicago on September 18, 1904. Mr. Schmidt's first railroad employment was as a stenographer in the freight traffic de-

News Department continued on next left-hand page.

there is a place . . .

WE FIRMLY believe that for a long long time, there will continue to be a demand for steam locomotives.

Therefore, while we *are* building diesel-electrics for the switching field — and while we *have* the highest hopes for the free-piston gas generator turbine which we are now testing for locomotive use— we will continue to build a complete line of steam locomotives.

We will continue to explore all possible ways of improving such locomotives. We will continue to build them with the traditional fineness of design and manufacture that is responsible for Lima's world-wide reputation. And we will continue to believe that there is a place for these locomotives — for such modern power as the 2-6-6-6's we are now building, as our fifth order for the C&O.

LIMA HAMILTON CORPORATION

LIMA, OHIO
Lima Locomotive Works Division
Lima Shovel and Crane Division

LIMA-HAMILTON CORPORATION

HAMILTON, OHIO
Hooven, Owens, Rentschler Co.
Niles Tool Works Co.

partment of the Erie at Chicago in September, 1922. The following May he advanced to secretary to the general freight agent, later being appointed secretary to the vice-president of operations. In February, 1927, Mr. Schmidt

Harry C. Schmidt

became secretary to the vice-president of traffic of the Erie and in November, 1931, he was promoted to chief clerk to vice-president, traffic department. He was appointed assistant general freight agent at Youngstown, Ohio, in August, 1938, and on January 1, 1941, he was promoted to general eastern freight agent at New York. Mr. Schmidt left the Erie to become assistant to the vice-president of traffic of the Lackawanna on July 1, 1942, being appointed freight traffic manager in charge of sales and service the following January, which position he held at the time of his recent advancement to general freight traffic manager.

T. H. Ramsey, whose appointment as western freight traffic manager of the Reading, at Chicago, was reported in

T. H. Ramsey

Railway Age of November 22, 1947, was born on June 7, 1905, at Conshohocken, Pa., and began his career with the Reading as a stenographer at Philadelphia, Pa., in 1923. He subsequently held positions as tracing clerk, freight traffic representative and traveling freight agent, and was transferred in the latter position to Cincinnati, Ohio, in 1936. He was appointed general agent at Wilmington, Del., in 1938 and New England freight agent at Boston, Mass., in 1939. Mr. Ramsey became division freight agent at Harrisburg, Pa., in 1944, which position he held at the time of his new appointment.

Leonard T. Schmid, officers' assistant in the freight traffic department of the Southern at Atlanta, Ga., has been promoted to assistant general freight agent, with the same headquarters, succeeding **Andrew L. Bay**, whose promotion to assistant to freight traffic manager at Washington, D. C., was announced in *Railway Age* of January 10.

Henry L. Albert, whose appointment as general traffic manager of the Lehigh & New England at Bethlehem, Pa., effective January 1, was reported in *Railway Age* of December 13, 1947, entered railroad service on May 1, 1911, in the office of the car accountant

Henry L. Albert

of the Lehigh & New England. From January 1, 1912, to July 15, 1927, he served as stenographer and clerk and in various other clerical positions in the traffic department of that road. On the latter date he became commercial agent and on February 1, 1932, he was appointed general freight agent, which position he held at the time of his appointment as general traffic manager.

C. A. Miller has been appointed Eastern traffic manager, freight and passenger department, of the Chicago & North Western, with headquarters at New York, having supervision over agencies located in New York; Boston, Mass.; Philadelphia, Pa., and Washington, D. C. **E. W. Ernst** has been appointed general agent, freight department, at New York, succeeding **M. R. Kielgas**, who has been appointed general Eastern passenger agent at New York, with supervision over agencies in New York, Boston, Philadelphia and Washington, D. C.

Herman Zink, general agent of the Chicago & Eastern Illinois at Buffalo, N. Y., has been transferred to Danville, Ill., succeeding **J. D. Sneed**, who has retired. **C. A. Ernst** succeeds Mr. Zink. **C. A. Brizius**, commercial agent at Evansville, Ind., has been appointed general agent at Tulsa, Okla., succeeding the late **R. E. McComas**. **G. H. Nourse** has been appointed general agent at Jacksonville, Fla., succeeding the late **J. G. Meehan**.

Albert H. Graham, whose appointment as traffic manager—sales and service of the Pittsburgh & West Virginia at Pittsburgh, Pa., was reported in *Railway Age* of January 3, was born at Pittsburgh, Pa., on October 24, 1908. Mr. Graham received his B.A. degree from Williams College in 1932 and his M.B.A from the Graduate School of Business Administration of Harvard University in 1934. Entering railroad service on December 8, 1938, as clerk in the transportation department of the Pittsburgh & West Virginia, he served in that capacity until September 1, 1940, when he became statistician in that department. On June 15, 1941, Mr. Graham became special representative in the traffic department and in July, 1943, he was appointed assistant to president at Pittsburgh. He became assistant to vice-president, traffic, at Pittsburgh in January, 1945, which position he held at the time of his recent appointment as traffic manager—sales and service.

ENGINEERING and SIGNALING

W. O. Houston, whose retirement as district engineer of the Michigan Central (New York Central System) at Detroit, Mich., was reported in *Railway Age* of January 3, was born at Burlington, Kan., and attended the University of Michigan, from which he received a degree in civil engineering in 1904. Mr. Houston worked during summer vacation periods in the engineering departments of the Ann Arbor and the M. C., and in 1904 he became instrument man for the latter road. From 1905 to 1909, he held positions as transitman, bridge inspector, resident engineer and division engineer for the New Orleans Great Northern (now part of the Gulf, Mobile & Ohio). Later, he held positions successively with the M. C. as assistant engineer at Windsor, Ont., and at St. Thomas, construction engineer at Detroit; and division engineer at St. Thomas and Jackson, Mich. In 1939 he was appointed district engineer at Detroit, the position he held until his recent retirement.

W. R. Rhodes, assistant engineer of the Missouri Pacific, with headquarters at St. Louis, Mo., has been promoted to assistant division engineer, with the same headquarters. **R. J. Bruce, Jr.**, assistant engineer at Wichita, Kan., has been transferred to St. Louis, succeeding Mr. Rhodes. **C. T. Fielding**, instrumentman at Wichita, has been promoted to assistant engineer there. **L. Winship**,

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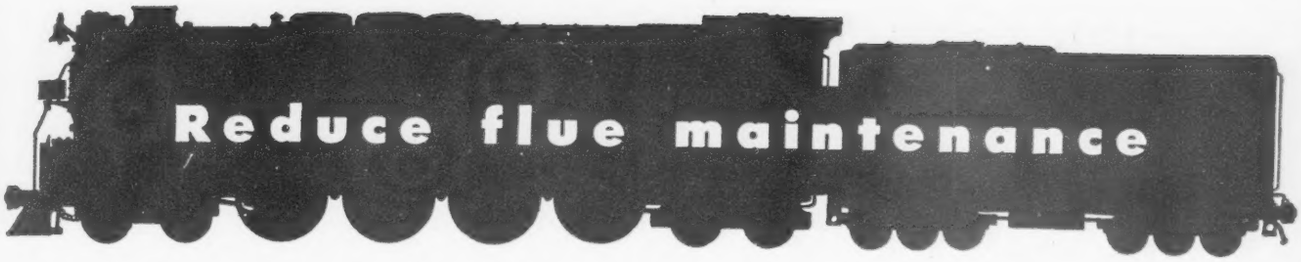

on existing locomotives

From the point of view of saving in flue maintenance, as well as improvement in steaming qualities, the installation of Security Circulators in existing steam locomotives will prove a profitable investment.

Security Circulators are suitably proportioned to the size and type of boiler to give the best results in bettering boiler performance and increasing locomotive availability.

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NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

assistant engineer at St. Louis, has retired.

L. F. Racine, whose appointment as chief engineer of the Chicago, Indianapolis & Louisville at Lafayette, Ind., was reported in the *Railway Age* of January 10, was educated in the public schools of Des Moines, Iowa, Lacombe, Alta., Salt Lake City, Utah, and at the University of Nevada. Mr. Racine's first employment was with the

L. F. Racine

Union Pacific during summer vacation periods while attending school, and in 1915 he joined the road's engineering department at Pocatello, Idaho. He advanced through successive positions to that of division engineer at Portland, Ore., on January 1, 1941. He was appointed division engineer at Salt Lake City, Utah, on July 1, 1942, in which position he was serving when he accepted the Monon appointment.

Robert F. Logan, whose appointment as chief engineer maintenance of way and structures of the Southern at Knoxville, Tenn., was reported in *Railway Age* of December 6, 1947, was born at

Robert F. Logan

Yadkinville, N. C., on March 13, 1904. He was graduated from the University of North Carolina in 1927 with a degree of bachelor of science in civil engineering. Mr. Logan first entered the service of the Southern at Danville, Va., serving intermittently from November 1, 1925, to September 1, 1926, as student engineer. On July 1, 1927 he was employed as a rodman at Danville and served successively as student apprentice at Charlottesville, Va., assistant track supervisor at Gainesville, Ga., track supervisor at Keysville, Va., and Manassas, and assistant trainmaster at Columbia, S. C. Mr. Logan was promoted to trainmaster at Richmond, Va., in July, 1935, and later served in that capacity at Greensboro, N. C. In May, 1941, he was promoted to superintendent at Richmond, transferring to Hattiesburg, Miss., in March, 1943, and to Atlanta, Ga. in June, 1945.

C. R. Riley, assistant division engineer of the Baltimore & Ohio, at Baltimore, Md., has been promoted to division engineer on the Baltimore division, west end, with headquarters as before at Baltimore, to succeed **George S. Crites,** retired.

G. C. Lindsey has been appointed assistant engineer of structures of the New York Central system, with headquarters at Cleveland, Ohio, succeeding **A. M. Westenhoff,** promoted.

Wilson Morrow, division engineer of the Baltimore & Ohio, has been promoted to engineer maintenance of way, with headquarters as before at Baltimore, Md., succeeding **H. L. Exley,** transferred.

PURCHASES and STORES

J. E. Thraff, assistant general storekeeper of the Great Northern at St. Paul, Minn., has succeeded to the duties of **G. E. Tallmadge,** assistant general storekeeper, who has retired. Mr. Thraff is succeeded by **R. R. Anderson,** traveling storekeeper.

G. W. Alexander, general storekeeper of the Central of Georgia at Macon, Ga., has been appointed purchasing agent, with headquarters at Savannah, Ga., succeeding **J. L. Bennett,** deceased. **C. A. G. Blomquist** has been appointed assistant purchasing agent at Savannah.

OBITUARY

Carl J. Burlage, chief claim agent of the Pennsylvania at Chicago, whose death was reported in *Railway Age* of January 10, was born on June 21, 1891, at Fort Wayne, Ind., where he entered the service of the Pennsylvania in 1907 as a clerk in the freight department. He later became overcharge clerk in the division freight office at Fort Wayne, and during the period from 1914 to 1918 he was employed outside the railroad industry. He rejoined the Pennsylvania on July 1, 1918, as claim investigator, which position he held until 1922, when he was appointed claim agent. The following year he became district claim agent at Fort Wayne, a position he held later at Buffalo, N. Y., and Cleveland, Ohio. He was further advanced to special claim agent at Pittsburgh, Pa., in 1937, and in 1945 he was promoted to chief claim agent of the railroad's Western region at Chicago, which position he held at the time of his death.

Charles D. Phillips, auditor of disbursements of the Spokane, Portland & Seattle at Portland, Ore., whose death was reported in *Railway Age* of December 20, 1947, was born at Garrett, Ind., on May 18, 1884, and entered railway service on January 1, 1906, with the mechanical department of the New York, Chicago & St. Louis. From January, 1907, to September, 1919, he held various positions in the engineering and operating departments of the Missouri Pacific, the Illinois Central and the Atchison, Topeka & Santa Fe, and in the latter year he went with the S. P. & S. as a special accountant, with headquarters at Portland. In January, 1928, Mr. Phillips was promoted to general accountant, with the same headquarters, and in June, 1933, he was further advanced to division accountant. He had held the position of auditor of disbursements since February, 1945.

William Roy McFarland, auditor of revenues of the Chespeake & Ohio, with headquarters at Detroit, Mich., died recently. He was born on February 20, 1889, at Lexington, Ky., and began his service with the C. & O. as a clerk in his home town in 1906. He subsequently worked for the Louisville & Nashville and the Southern before joining the Pere Marquette (now Pere Marquette district of the C. & O.) at Detroit. Mr. McFarland advanced through successive clerical positions until 1918, when he became chief clerk to auditor of freight traffic. His next position was that of supervisor of zone revision bureaus, which he held from 1930 until 1944, at which time he was appointed assistant auditor of revenues. In 1946 he was promoted to auditor of revenues, the position he held at his death.

William Eason Smith, who retired as vice-president and general manager of the Louisville & Nashville on November 1, 1946, died on January 17, at Melbourne, Fla., following a heart attack suffered a few days before.

Arthur Jackson Flowers, master mechanic of the Central of Georgia at Savannah, Ga., died on January 3 after a brief illness, in his 69th year.

James L. Bennett, purchasing agent of the Central of Georgia for the past 45 years, died from a heart attack at his office in Savannah, Ga., on January 9, at the age of 74. Mr. Bennett entered the service of the Central of Georgia on September 17, 1890, as a clerk in the office of the master car builder at Savannah, later transferring to the office of the master mechanic there. In September, 1906, he was appointed general storekeeper and in 1913 he was promoted to purchasing agent.